

**REQUEST FOR PROPOSALS
FOR
SHELTON LANDFILL POST-CLOSURE ENVIRONMENTAL
LIABILITY AND RISK TRANSFER**

SECTION 16

RELEVANT MAJOR ENVIRONMENTAL PERMITS

SHELTON LANDFILL ENVIRONMENTAL PERMITS

The following is a listing of the environmental permits that are currently in effect for the Shelton Landfill. Those marked with an asterisk (*) are attached to this listing. All of the permits will be available for review during the Document Review period.

1. SITE WIDE

1.1 Stormwater Discharge Certificate of Registration No. GSI000512

- (a) Certificate (09/24/03)

2. MSW/INTERIM ASH AREA

2.1 Solid Waste Permit No. SW-126-1E, Permit for Expansion and Operation

- (a) Permit (08/12/83)*
- (b) Permit Modification to Approve Disposal of Residue (02/22/88)*
- (c) Minor Permit Amendment to Construct a Temporary Gas Venting System (09/01/88)*
- (d) Minor Permit Amendment to Construct and Operate a Landfill Gas Recovery System (05/11/89)*
- (e) Minor Permit Amendment to Construct and Operate an Electric Generating Facility (02/25/93)*

2.2 Solid Waste Permit No. SW-126-1VA, Permit to Construct a Vertical Expansion

- (a) Permit (09/01/89)*

2.3 Solid Waste Landfill Closure Authorization

- (a) Authorization (10/10/96)*

2.4 Solid Waste Authorization for the Disruption of Shelton Landfill

- (a) Authorization (09/17/01)*

2.5 Groundwater Discharge Permit No. LF0000023

- (a) Permit (01/11/85)*

- 2.6 Air Permit Nos. 163-119-037 and 038, Permits to Operate**
 - (a) Permits (12/13/91)
- 2.7 Air, Temporary Authorization to Operate a Stationary Air Contaminant Source**
 - (a) Temporary Authorization (08/31/99)
- 2.8 Air Permit No. 163-119-091, Permit to Construct Gas Collection and Control System**
 - (a) Permit (10/18/01)
- 2.9 Air Permit No. 163-119-091, Permit to Construct and Operate Gas Collection and Control System**
 - (a) Permit (04/26/02)*
- 2.10 Letter Confirming No Permit Change Required for Addition of Natural Gas Pipeline**
 - (a) Permit Letter (11/28/06)
- 2.11 City of Shelton Inland Wetlands Permit No. 90-35**
 - (a) Permit (01/17/91)
- 2.12 City of Shelton Inland Wetlands Permit No. 92-3**
 - (a) Permit (3/31/92)
- 2.13 City of Shelton Certificate of Wetlands Compliance**
 - (a) Certificate (11/01/94)
- 2.14 U.S. Corps of Engineers Wetlands Nationwide Permit**
 - (a) Permit (09/28/93)

3. NORTHEAST AND SOUTHEAST LINED ASH AREAS

- 3.1 Solid Waste Permit No. 1260181, Permit to Construct**
 - (a) Permit (08/05/92)*
 - (b) Minor Permit Amendment for Use of "Local Government Financial Test" (11/01/98)*

3.2 Solid Waste Permit No. 1260227, Permit to Operate

- (a) Permit (04/19/94)*

3.3 Solid Waste Approval to Dispose of Residue in Northeast Lined Ash Area

- (a) Approvals (12/19/96; 08/16/96; 07/18/96; and 06/27/96)*

3.4 Solid Waste Permit Nos. 1260181 (Construct) and 1260227 Operate

- (a) Modification to Revise Final Closure Configuration of SE and NE Lined Ash Areas (08/25/98)*

3.5 Solid Waste Landfill Closure Authorization

- (a) Authorization ()*

3.6 Groundwater Discharge Permit No. LF0000052

- (a) Permit (08/27/96)*
- (b) Minor Permit Modification for Changes in Benthic Monitoring Program (09/05/97)*

3.7 POTW Permit No. SP0001459

- (a) Permit (06/27/01)*

3.8 Town of Stratford Special Permit to Discharge to the Sanitary Sewer

- (a) Special Permit (06/16/04)*

3.9 Water Management Approvals

- (a) Approval to Install and Operate an Ash Residue Leachate Collection and Pretreatment Facility (07/07/94)*
- (b) Approval to Install a Wastewater Transfer and Neutralization System (04/22/93)*

4. HAZARDOUS WASTE AREA

4.1 U.S. EPA Closure Letter

- (a) Letter (10/17/89)*
- (b) Letter (11/29/95)*



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PERMIT TO THE CONNECTICUT RESOURCES RECOVERY AUTHORITY (CRRA)
 FOR EXPANDING AND OPERATING A SOLID WASTE DISPOSAL AREA IN
 SHELTON, CONNECTICUT.

An application for a permit dated February 17, 1982, has been
 submitted by:

Connecticut Resources Recovery Authority
 179 Allyn Street Suite 603
 Hartford, Connecticut 06103

for a vertical and horizontal expansion to the solid waste disposal
 area on 42 acres of property to be owned by the CRRA and located off
 Route 110 in Shelton, north of and adjacent to the Farmill River, and
 west of the Housatonic River.

THIS PERMIT IS HEREBY GRANTED in accordance with Section 22a-208
 Connecticut General Statutes and based on the following submittals:

1. A "Landfill Expansion Feasibility Investigation" prepared
 for the applicant by Fuss & O'Neill and received by the
 DEP Solid Waste Management Unit on October 5, 1982.
2. A site "Operation and Management Plan for Landfill Expansion"
 prepared for the applicant by Fuss & O'Neill and received by
 the DEP Solid Waste Management Unit on October 5, 1982.
3. A report entitled "Supplemental Submission, Landfill Expansion
 for CRRA" prepared by Fuss & O'Neill in December of 1982.

PROVIDED THAT

1. ~~Solid wastes shall only be deposited in the area of the property delineated for that purpose on the site plans.~~
2. The site development and operational plans, as prepared by
 Fuss & O'Neill, Inc. shall be strictly adhered to throughout
 the site life, unless modified in writing by the Commissioner.
3. The cell method of sanitary landfill operation, involving cell
 construction and spreading, compacting and covering of all de-
 posited solid waste daily is conducted only within the delineated
 limits of the proposed landfill operation.

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4. Bulky wastes shall be incorporated into the cell working face and be compacted and covered daily along with the other solid wastes.
5. A minimum of five feet of clean fill shall be maintained between the bottom of the deposited solid waste and the high ground water level or bedrock.
6. Prior to commencing any disposal operations, the prepared site shall be inspected by staff members of the Department of Environmental Protection. During the inspection, the operator will be asked to dig a minimum of three (3) test pits approximately five (5) feet deep to ascertain that a minimum of five (5) feet of separation between refuse and high watertable or bedrock can be maintained.
7. The operator shall furnish certification from a land surveyor registered in the State of Connecticut that the compacted base on which refuse is to be placed meets the grades designated on Drawing No. "Phase II, Plate 4," plus or minus six (6) inches. Said certification shall be for the entire disposal area and shall be received by the Solid Waste Management Unit prior to the deposition of any solid waste.
8. The operator will not cause, suffer or otherwise permit open burning of solid waste at this disposal area.
9. The site access shall be controlled with a locked gate. The site shall have an attendant present when open during the posted hours.
10. Waste processing and disposal operations shall be conducted so as to maximize runoff, minimize infiltration and prevent erosion and the collection of standing water.
11. A proper sanitary landfill method of operation involving spreading, compacting, and covering daily of all material shall be carried on.
12. Disposal operations are carried on by a certified operator in accordance with Section 19-524-5 of the Solid Waste Management Regulations.
13. No septic tank wastes, liquid or semi-solid industrial wastes, waste water treatment plant sludge, or other special industrial wastes shall be disposed of unless the wastes and the specific disposal methods are approved by the Department.
14. Disposal or storage of hazardous wastes at this facility is prohibited.
15. The applicant shall furnish the Commissioner, within 60 days of issuance of this permit, a performance bond or other surety in the amount of \$140,000 to insure that proper site closure in accordance with applicable state statutes and regulations can be completed.

16. CRRA will continue to allow the City of Shelton and Archer to use the landfill as contracted for through April 30, 1987;
17. The issuance of a solid waste facility operating and management permit in this case will act as a revocation of the present site permit held in the name of the City of Shelton.
18. Prior to use, DEP Solid Waste Management Unit (SWMU) will be notified so that an inspection can be made regarding backfilled areas; as-built plans will be provided as requested throughout the lifetime of the permit;
19. All limits of the approved fill area will be clearly marked in the field on a permanent basis;
20. The gas-venting system at the north end of the site will be a first priority and shall be in place no later than 90 days after permit issuance;
21. Landfill expansion areas adjacent to tidal wetlands, inland wetlands, or water courses shall be bordered with silt fence as needed to control runoff discharges.
22. At least six months prior to removal of metal hydroxide cells the applicant will advise DEP Solid Waste Management Unit as to what removal option is to be used and will in no case begin removal until properly permitted.
23. Ground and surface water quality monitoring shall be conducted in accordance with the current 22a-230 discharge permit for the facility. Results shall be reported to the DEP Solid Waste and Water Compliance Units on a quarterly basis. Monitoring shall continue for at least 25 years after site closure.
24. The applicant shall provide the DEP Solid Waste Unit with quarterly tonnage records in accordance with state solid waste regulations.
25. For the life of the site operation, the applicant shall contract the services of a professional engineer, quarterly (4 times each year), to insure that the site operator is developing the landfill in strict accordance with the site operation and management plans on which this permit is based. The Department of Environmental Protection, Solid Waste Management Unit will be furnished a copy of the engineer's inspection report which specifically address such items as conformance with site plans, contours, slope stabilization, erosion and storm runoff control, sequence of cell construction, and results of quarterly gas monitoring as outlined in the site plan report.

26. A citizen advisory committee be established on such terms and conditions as it chooses, through the coordination of the Shelton Citizens Against the Dump. The applicant will meet at least twice a year with a small, representative committee group to discuss monitoring results and ongoing activities at the site. The applicant will provide sufficient technical personnel to address any issues of concern which such committee submits to it at least ten days in advance of each meeting, but in no other way is the applicant obliged to fund any expenses associated with such committee.

When required, the committee may request the presence of DEP technical staff, upon reasonable advance notice.

→ [The applicant will provide the committee with a copy of each required or voluntary submission it makes to DEP and shall annually produce a year-end summary of activities and a schedule for the coming year. Upon advance notice and with the consent of the applicant, representatives of the committee may enter the landfill for purpose of inspection under such reasonable terms and conditions as the applicant may establish. Such access in no way is to be construed as opening the site to general public access or to be in derogation of any property interests or rights of the applicant.

The sole purpose of such a committee shall be to ensure that the citizens of Shelton and the immediately surrounding area are adequately informed of the landfill's activities and its compliance or noncompliance with all laws and regulations. Its role is advisory, not regulatory; however, the committee shall be considered a party to any administrative action involving this site, including any enforcement orders issued for any reason. Upon request, the committee may require the scheduling of a public hearing concerning any such administrative proceeding which is initiated during the life of these permits, and such a hearing will be scheduled and in the evening, in Shelton.

The Commissioner through this hearings officer, shall remain the final arbiter of any disputes arising out of the performance of this condition by the applicant.

- [27. Prior to the initiation of any activities under these permits, the applicant shall notify DEP SWMU of the name and qualifications of the person(s) designated to be the site operator.

If such operator is to remain the Archer Co., it shall also at that time submit an evaluation, prepared by its own engineers, of the current on-site daily operations, especially daily and weekly cover operations and whatever steps it believes necessary to achieve full compliance with all regulatory provisions. No operations under the new permits should begin until DEP SWMU has agreed that all outstanding operational difficulties or violations if any, have been adequately rectified to permit this operator to begin these larger scale operations on behalf of the applicant.

- 28. Upon completion of any portion of the disposal area, that portion shall be graded, covered with two feet of clean soil, and seeded, according to the site plans.
- 29. All major sources of final cover material shall be DEP approved and shall conform to grain size specifications under Section 19-524-2 of the Solid Waste Regulations,
- 30. This permit is subject to and in no way derogates any present or future property rights or other rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor may exclusive privileges, and is further subject to any and all public and private rights and to any federal, state, or local laws or regulations pertinent to the property or activity affected hereby.
- 31. This permit is transferable only with the prior written permission of the Commissioner of DEP.
- 31. The operator complies with all rules and regulations of the Department of Environmental Protection applicable to the operation and maintenance of the disposal area as they may be amended from time to time.

Dated in Hartford, Connecticut this 12th day of August 1983

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STANLEY J. PAC, COMMISSIONER

By Stanley J. Pac
Stanley J. Pac, Commissioner

Operator/Owner

[Signature]

CRRA, The President
Solid Waste Permit No. 126-1E



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PERMIT MODIFICATION

APPROVAL OF AN APPLICATION FROM THE CONN. RESOURCES RECOVERY AUTHORITY (CRRA) TO DISPOSE OF RESIDUE AT THEIR REGIONAL LANDFILL IN SHELTON.

In accordance with Sec. 22a-209-4(h) of the R.C.S.A., the CRRA is hereby authorized to dispose of residue (a special waste) from the Bridgeport Resource Recovery Authority at the CRRA/Shelton Regional Landfill. Disposal shall be conducted in monocells on top of the existing landfill until the grades authorized in Solid Waste Permit No. 126-1E are reached. The residue disposal plans prepared for the CRRA by Fuss & O'Neill Engineers and received by the DEP on November 24, 1987 shall be strictly adhered to.

Site operation shall be conducted in accordance with these conditions which are in addition to those listed in Permit No. 126-E:

- 1) The prepared residue monofill and separating berm shall be inspected by the DEP prior to use.
- 2) The separating berm shall be a minimum of 5' wide at all points. The location shall be surveyed and staked in the field beginning each new lift so that each berm is placed directly above the previous one.
- 3) A surveyor or professional engineer registered in the State of Connecticut shall inspect the disposal area quarterly for the remaining site life and report to the DEP in writing the operation's adherence to the site operation and management plan, remaining volume, and overall conduct of landfilling operations. Reporting shall be done concurrently with the water quality monitoring reports.
- 4) Water quality monitoring shall be performed quarterly as described in Table 1 of the site plans.
- 5) The dedicated dioxin well shall be installed within 60 days of issuance of this amendment.
- 6) The first of the 3 proposed pan lysimeters shall be installed at the base of the first residue cell to be constructed (during plant start-up/shakedown). The leachate shall be analyzed quarterly as soon as it forms during the next regularly scheduled sampling period.

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- 7) All residue shall be tested regularly prior to disposal in accordance with the DEP draft residue testing regulations (sec. 22a-231-1).
- 8) This modification may be revoked, suspended, or modified in accordance with the reasons and procedures set forth in Sec. 22a-209-4(h) of the R.C.S.A.

Dated in Hartford, CT this *22* day of *February*, 1988.



Leslie Carothers
Commissioner

Permit No. 126-1E-m



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



MINOR PERMIT AMENDMENT

APPROVAL FOR THE CONSTRUCTION OF A TEMPORARY GAS VENTING SYSTEM ALONG THE TOE OF THE WESTERN SLOPE AT THE CONNECTICUT RESOURCES RECOVERY AUTHORITY SOLID WASTE DISPOSAL AREA, SHELTON, CONNECTICUT, THROUGH AN AMENDMENT TO SOLID WASTE PERMIT NO. 126-1E.

In accordance with Section 22a-209-4(f) of the Regulations of Connecticut State Agencies and engineering plans and specifications prepared by Fuss & O'Neill Consulting Engineers, Incorporated and received by the Department of Environmental Protection on August 19, 1988, Solid Waste Permit Number 126-1E is hereby amended.

Specifically, the Connecticut Resources Recovery Authority (CRRA) is authorized to construct approximately 1600 feet of gas venting trench along the toe of the western slope at its regional landfill located in Shelton, Connecticut. This gas venting system is being constructed to prevent the migration of combustible gases from the landfill site to adjacent properties for the purpose of mitigating an actual or potential hazard to any persons or such properties.

This minor permit amendment is granted with the following additional conditions:

- (1) The consulting engineer for the CRRA shall supervise the construction of the temporary gas venting system to ensure conformance with the above referenced plans and specifications. Construction of this system shall be completed within sixty (60) days from the date of issuance of this approval.
- (2) Within thirty (30) days of completion of the temporary gas system, the consulting engineer for the CRRA shall submit a drawing to the Solid Waste Management Unit of the Department of Environmental Protection (hereinafter the Department) showing the plan and profile of the system as built.
- (3) The consulting engineer for the CRRA shall monitor methane levels at each of the four (4) gasports located as shown on the above-referenced plans. Methane levels shall be monitored on a monthly basis for at least one (1) year from the date the construction of the temporary gas venting system is complete. The consulting engineer shall submit monthly reports on the results of this methane gas monitoring to the Department. ~~On the basis of the monitoring results submitted by the consulting engineer for the first three (3) months~~

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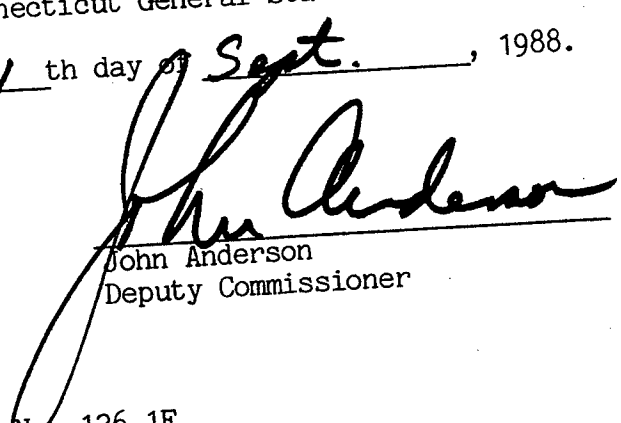
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~~that the temporary gas venting system is in operation, a determination as to the effectiveness of this passive system will be made by the Department. If methane levels, on average, exceed the lower explosive limit for the gas, the gas venting system shall be modified by the installation of a forced venting component, including all appurtenant equipment necessary to make the system operate such that methane levels do not exceed the lower explosive limit of the gas at any of the gasports. The CRRA shall complete this installation within sixty (60) days of being notified in writing by the Department as to its determination regarding the effectiveness of passive gas venting. Within thirty (30) days after the completion of the installation of the forced venting component, the consulting engineer for the CRRA shall submit an as-built drawing to the Department showing all details of the installation.~~

(4) If the results for the first year of monitoring demonstrate the effectiveness of the temporary gas venting system in reducing methane levels, on average, below the lower explosive limit of the gas, whether by means of passive or forced venting, monitoring at the western gasports shall be performed at the same frequency as that currently required to be performed at the northern gasports. However, the Commissioner reserves the right to extend the duration of gas monitoring and to modify the frequency of such monitoring based on monitoring results reported during the temporary gas venting system's first year of operation. The Commissioner also reserves the right to require the installation of a forced venting component if at any time reported methane levels so warrant.

(5) This minor permit amendment may be suspended or revoked in accordance with Section 4-182 of the Connecticut General Statutes.

Dated in Hartford, Connecticut this 1 th day of Sept., 1988.


 John Anderson
 Deputy Commissioner

Minor Amendment to Solid Waste Permit No. 126-1E
 cc: Shelton Landfill Citizens Advisory Committee



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



MINOR PERMIT AMENDMENT

APPROVAL TO CONSTRUCT AND OPERATE A LANDFILL GAS RECOVERY SYSTEM AND FLARE AT A SOLID WASTE DISPOSAL AREA OWNED BY THE CONNECTICUT RESOURCES RECOVERY AUTHORITY AND LOCATED AT 866 RIVER ROAD IN SHELTON, CONNECTICUT.

In accordance with Section 22a-208a(e) of the Connecticut General Statutes and Section 22a-209-4(f) of the Regulations of Connecticut State Agencies, a minor amendment to solid waste facility permit number 096-1E is hereby granted to the Connecticut Resources Recovery Authority (CRRA) for the construction and operation of a landfill gas recovery system and flare at the solid waste facility referenced above. The purpose of constructing and operating this landfill gas recovery system and flare is to prevent the subsurface migration of combustible gases from the solid waste disposal area to adjacent properties, and thereby mitigating any actual or potential hazard to life or property.

Construction and operation of the landfill gas recovery system and flare shall be conducted in accordance with CRRA's application dated January 20, 1989 and the following supporting materials:

(A) An engineering drawing entitled: "Well System, Shelton," and numbered D-SH-01, sheet 1 of 2, prepared for the CRRA by Energy Tactics, Incorporated of Yaphank, New York with the original dated May 12, 1988 and revised February 24, 1989.

(B) An engineering drawing entitled: "Well System, Shelton," and numbered D-SH-01, sheet 2 of 2, prepared for the CRRA by Energy Tactics, Incorporated with the original dated March 14, 1988 and revised February 3, 1989.

(C) An engineering report entitled: "Program Plan & Permit Data, Landfill Gas Recovery & Utilization Project, Shelton Landfill, Shelton, CT.", prepared for the CRRA by Energy Tactics, Incorporated dated May 16, 1988 and revised November 11, 1988.

(D) An addendum to the engineering report referenced in (C) above dated February, 1989.

This minor permit amendment is granted with the following special conditions:

(1) Final technical specifications, construction drawings and other information concerning the final design and construction of the landfill gas recovery system and flare shall be submitted by the CRRA to the Department of Environmental Protection (DEP) for review and approval within thirty (30) days of the start of construction.

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(2) The consulting engineer for the CRRA shall supervise the construction of the landfill gas recovery system and flare to ensure conformance with the final design plans and specifications referenced in Paragraph (1) above of these special conditions.

(3) The DEP shall be notified of any minor design modification to the landfill gas recovery system and flare within 48 hours of first knowledge. Written confirmation of any minor design modification shall be provided by CRRA to DEP within 10 calendar days of first knowledge. A minor design modification includes, but is not limited to, the rerouting of collection header or well lateral piping or the relocation of a landfill gas recovery well. No major design modification to either the landfill gas recovery system or the flare shall be made without the prior written approval of the Commissioner of Environmental Protection. A major design modification includes, but is not limited to, a material re-design of a system component or the relocation/re-orientation of the flare.

(4) Any buried solid waste which is excavated during construction of the landfill gas recovery system shall be disposed of by the end of the day's activity. Such waste may be disposed of on-site in any available area formerly or currently used for the disposal of mixed municipal solid waste, and shall not be disposed of in any area formerly or currently used for ash disposal. In the event this excavated waste cannot be disposed of on-site, it shall be disposed of at a permitted solid waste disposal area currently being used for the disposal of mixed municipal solid waste. Any amount of this excavated waste intended for on-site disposal shall be compacted and then covered with a minimum of 6" of earth at the end of the day's activity.

(5) If the flare is to be constructed on a foundation intended to support the future landfill gas power generation facility, the CRRA shall submit to DEP, before construction begins, an engineering report which provides an assessment of the strength and stability of the soils underlying the area of the proposed foundation and an evaluation as to whether the proposed foundation design is appropriate based on known soil conditions and the maximum loading anticipated. This report shall be prepared by a qualified geotechnical engineer licensed to practice professional engineering in the State of Connecticut.

(6) The CRRA shall maintain the active gas venting system previously installed along northern and western site boundaries in a condition ready for immediate use in the event additional gas recovery capacity is needed to prevent the concentration of methane gas in the ground at these locations from exceeding its lower explosive limit.

(7) Within thirty (30) days from the date of issuance hereof, the CRRA shall cause the operation of the passive gas venting system previously installed along the western site boundary to be permanently discontinued. As a minimum, the operation of this passive gas venting system shall be permanently discontinued by cutting each riser pipe down to the existing grade line and then filling the buried, open portion of each pipe with an impermeable grout up to existing grade.

(8) The CRRA shall monitor methane levels at each gasport located along northern and western site boundaries and at each gas testing point

located as shown on a plan entitled: "Gas Testing Points & Results (November 8, 1988), Shelton Landfill," prepared by Fuss & O'Neill Consulting Engineers of Manchester, Connecticut and dated November, 1988. Methane levels shall be monitored on a weekly basis for as long as necessary to determine the effectiveness of the landfill gas recovery system operation. The CRRA shall submit monthly reports on the results of this methane gas monitoring to DEP. The Commissioner may authorize in writing a reduction in the frequency of this gas monitoring based upon a demonstration by the CRRA that methane concentrations at all monitoring points have decreased to levels that no longer pose an actual or potential hazard to life or property.

(9) The CRRA shall submit to DEP a comprehensive operation and maintenance manual for the landfill gas recovery system and flare, as such manual is available.

(10) The CRRA shall allow the DEP to inspect the landfill gas recovery system and flare to ensure compliance with the final design plans and specifications within ten (10) days before the start of its actual operation.

(11) The CRRA shall determine the characteristic of the landfill gas condensate immediately after start-up of the landfill gas recovery system and flare. Such a determination shall be based on an analysis of a representative, composite sample and is required to verify the non-hazardous characteristic of this material. In the event the characteristic of this condensate varies from what is expected, the CRRA shall be responsible for the proper management of this material in accordance with all applicable federal, state and local laws. During the operation of the landfill gas recovery system and flare, the CRRA shall continue to monitor the characteristic of the condensate every three (3) months along with other groundwater monitoring required at the site. Results of this condensate monitoring shall be obtained from the analysis of a representative, composite sample and shall be reported to the DEP as they become available to the CRRA.

(12) After completion of construction, the CRRA shall submit to the DEP a record drawing of the landfill gas recovery system and flare as-built. This record drawing shall be prepared by a land surveyor licensed to practice in the State of Connecticut and shall bear his live, authentic signature and stamp or seal. In addition, the CRRA shall certify in writing to the DEP that the landfill gas recovery system and flare have been built substantially in conformance with the final design plans and specifications. This written certification shall bear the live, authentic signature and stamp or seal of a professional engineer licensed to practice in the State of Connecticut.

(13) The CRRA shall submit to DEP monthly progress reports during the time the landfill gas recovery system is being balanced. These progress reports shall include results of all parameters routinely measured as part of the normal course of balancing the landfill gas recovery system.

(14) This permit is subject to and in no way derogates any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material nor any exclusive privileges and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or activity affected thereby.

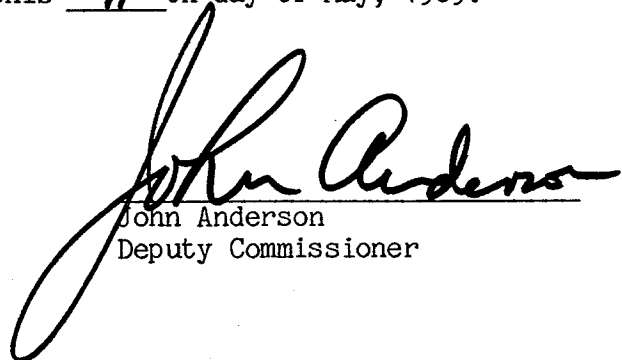
(15) This permit may be revoked, suspended, or modified in accordance with law.

(16) This permit is transferable only with the prior written permission of the Commissioner in accordance with Sec. 22a-209-4(g) of the RCSA.

(17) The CRRA shall comply with the regulations for the control of noise, Sec. 22a-69-1 through 22a-69-7.4, inclusive, of the RCSA.

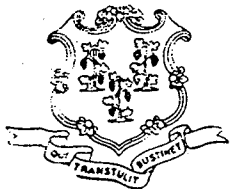
(18) This permit does not relieve the CRRA of obligations under applicable federal, state, and local laws.

Dated in Hartford, Connecticut this 11 th day of May, 1989.



John Anderson
Deputy Commissioner

Minor Amendment to Solid Waste Permit No. 126-1E



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



MINOR PERMIT AMENDMENT

APPROVAL TO CONSTRUCT AND OPERATE AN ELECTRIC GENERATING FACILITY AT A SOLID WASTE DISPOSAL AREA OWNED BY THE CONNECTICUT RESOURCES RECOVERY AUTHORITY AND LOCATED AT 866 RIVER ROAD IN SHELTON, CONNECTICUT.

In accordance with Section 22a-208a(e) of the Connecticut General Statutes and Section 22a-209-4(f) of the Regulations of Connecticut State Agencies and in accordance with the August 10, 1992 and February 3, 1993 submittals from the Connecticut Resources Recovery Authority (CRRA), Solid Waste Permit No. 126-1E dated August 12, 1983 is hereby amended to allow the construction and operation of an electric generating facility at the facility referenced above. The purpose of constructing and operating this electric generating facility is to convert the energy in the combustible landfill gases into useful electric energy.

Construction and operation of the electric generating facility shall be conducted in accordance with the CRRA's submittals dated August 10, 1992 and February 3, 1993 and the following supporting materials:

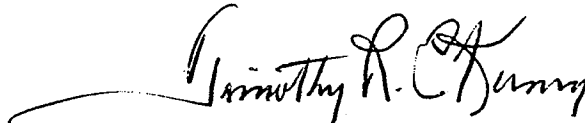
- (A.) An engineering drawing entitled: "Shelton Landfill Gas Recovery and Electric Generation Facility", prepared by the CRRA and dated February 4, 1992 and revised April 6, 1992.
- (B.) Engineering drawings entitled: "Landfill Gas Recovery/Utilization Project Shelton Connecticut Landfill, General Arrangement Plan, Plan & Flow Diagram" and "Landfill Gas Recovery/Utilization Project Shelton Connecticut Landfill, General Arrangement Plan, Elevation", numbered DWG. No. 1 and DWG. No. 2, respectively, prepared for the CRRA by R. E. Pustorino, P. C. Consulting Engineers, original not dated.

This minor permit amendment is granted with the following special conditions:

1. The permittee shall provide written notification to the Waste Management Bureau's Waste Engineering & Enforcement Division (WEED) prior to facility construction and upon construction completion.
2. The consulting engineer for the permittee shall supervise the construction of the electric generating facility to ensure conformance with the submitted design plans and specifications. Upon completion of construction, the permittee shall submit to the Commissioner a complete set of as-built drawings of the electric generating facility.
3. The permittee shall notify the Commissioner when the electric generating facility is inoperable due to mechanical failure or due to scheduled maintenance.

4. The permittee shall submit to the Commissioner copies of the final agreement for the purchase of energy. Any subsequent amendments to this agreement shall be submitted to the Commissioner within seven (7) days of execution.
5. This permit is subject to and in no way derogates any present of future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material nor any exclusive privileges and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or activity affected thereby.
6. This permit may be revoked, suspended or modified in accordance with law.

Dated in Hartford, Connecticut this 25th day of February 1993.



~~Robert E. Moore~~
~~Deputy Commissioner~~

Minor Amendment to Solid Waste Permit No. 126-1E

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PERMIT TO CONSTRUCT A VERTICAL EXPANSION TO THE
CRRA LANDFILL IN SHELTON FOR ASH RESIDUE DISPOSAL

Pursuant to Section 22a-208a of the Connecticut General Statutes and Section 22a-209-4(c) of the Regulations of Connecticut State Agencies (RCSA), a permit to construct is hereby granted to the Connecticut Resources Recovery Authority (CRRA or permittee) to construct a vertical expansion of the Shelton Regional Landfill for disposal of ash residue.

An application for a permit dated April 18, 1988 was submitted by:

Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, Connecticut 06106

for a vertical expansion to the solid waste disposal area on 42 acres of property owned by the permittee and located off Route 110 in Shelton, north and adjacent to the Farmill River and west of the Housatonic River. The expansion is to be used only for disposal of ash residue from the Bridgeport Resource Recovery Project or other special wastes as approved in writing by the Commissioner.

Terms and Conditions

1. The facility shall be constructed in accordance with the documents specified in the following terms and conditions and certain other documents, as follows:

- A. Report Entitled "Landfill Expansion Feasibility Investigation," by Fuss & O'Neill, February 1982, received by the Solid Waste Unit of DEP on October 5, 1982.
- B. Report entitled "Operation and Management Plan for Landfill Expansion," by Fuss & O'Neill, received by the Solid Waste Unit on October 5, 1983.
- C. Report entitled "Supplemental Submission, Landfill Expansion," by Fuss & O'Neill, December 1982.
- D. Revised plans and report entitled "Operation and Management Plan for Vertical Landfill Expansion with Deposition of Municipal Waste Combustion Ash," by Fuss & O'Neill, January 1988, with permit application dated APRIL 18, 1988, Received by the Solid Waste Unit on July 27, 1988.

2. The expansion shall be limited to elevation 170 feet above mean sea level (MSL) at either the western or eastern edge of the top of the expansion, and to whatever additional elevation is necessary at the other of those two edges to achieve a grade of 4 to 6% across the top.

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3. On or before 180 days after issuance of this permit, the permittee shall submit a draft future public use and recreation plan for the site to the City of Shelton, the Citizens Advisory Committee and the Commissioner for their review and comment. On or before 365 days after issuance of this permit, the permittee shall submit a final future public use and recreation plan to the City and CAC for review, and to the Commissioner for her review and approval. In drafting the final plan, the permittee shall consider all comments received from the City and CAC and shall correct any deficiencies noted by the Department. The final plan shall include but not be limited to a plan for future use of the site by the public and for post-closure care and maintenance of the site, a strategy for implementing that plan, an implementation schedule, and an estimate of the cost of implementing the plan. The permittee shall execute the approved plan in accordance with the approved schedule.

4. On or before 60 days after approval of the plan required by condition 3 above, the permittee shall post a bond or other surety acceptable to the Commissioner in an amount no less than the estimate of costs in the approved plan, in order to assure compliance with the approved plan. Except as specified herein, and with the modifications specified in 22a-209-4(i)(1) of the RCSA, the provisions of 40 CFR 264.141 to 264.143 inclusive and 40 CFR 264.151, as they exist on the date of issuance of this permit, shall govern the posting and release of such surety. The permittee shall maintain such surety until the plan approved under Condition 3 is fully executed. The amount of the surety may be reduced with the prior written approval of the Commissioner upon a showing that the costs of executing the plan have decreased, and shall be increased by the permittee within 60 days of the end of each fiscal year for the Bridgeport Project in order to reflect inflation and any increase in the cost for execution of the plan.

5. On or before 60 days after issuance of this permit, the permittee shall submit to the Commissioner for her review and approval a revised plan and report to reflect the maximum permitted elevation of the landfill which plan and report shall include but not be limited to a plan for the operation and management of the facility; proposed measures for erosion and sedimentation control to protect tidal wetlands, inland wetlands and watercourses, which plan shall be consistent with the guidelines for erosion and sedimentation control prepared by the Connecticut Council on Soil and Water Conservation, as amended; a proposal for final closure of the site; a proposal for short and long term landscaping of the site, which shall provide for immediate final cover, seeding and landscaping of all areas of the landfill which have reached final grade, except that the permittee may delay final landscaping of the west slope until the fall of 1989; and a schedule for implementation of such plans and proposals. Such plans and proposals may, with the written approval of the Commissioner, be modified to be consistent with the future public use and recreation plan approved under condition 3 above. The permittee shall execute the approved plans and proposals in accordance with the approved schedules.

6. The permittee shall pay to the City of Shelton a host community equity adjustment payment in the amount of \$6.00 per ton for the first 350,000 tons of ash residue disposed of under the terms of this permit. In the event that the permitted land form can receive more than 350,000 tons of ash residue, the permittee shall pay the City of Shelton a host community equity adjustment in the amount of \$3.57 per ton of ash residue over 350,000 tons disposed of in the landfill. The payments for tons delivered during each quarter in the

Bridgeport Project's fiscal year shall be made to the City within 30 days after the end of that quarter. The host community equity adjustment shall be reduced by any amount which the permittee pays to the City under Conn. Gen. Stat. section 22a-282.

7. The permittee shall submit to the Solid Waste Management Unit of the Department quarterly reports of the tonnage of ash residue delivered to the site and payments made to the City of Shelton as required by this permit.

8. The permittee shall operate and maintain the disposal area in accordance with all site development, operation and management, erosion and sedimentation control, landscaping and other plans approved by the Commissioner. Only ash residue shall be deposited in the area of the site delineated for that purpose on the approved site plans.

9. The ash residue shall be monofilled and shall be covered daily in accordance with the regulations of the Department. The disposal area shall be graded, covered and seeded in accordance with the approved plans and the regulations of the Department. All sources of final cover material shall be approved by the Department.

10. On or before thirty days after permit issuance, the permittee shall install the remaining two pan lysimeters proposed in the permittee's November 1987 submittal for a permit modification and verify to the Commissioner that such action has been completed.

11. Ground and surface water quality monitoring shall be conducted in accordance with the existing discharge permit and the locations and schedule outlined on pp. II-21 to -23 of the application. Monitoring results shall be reported to both the Solid Waste Management and Water Compliance Units of the Department on a quarterly basis. Such reports shall include all information which those Units deem necessary to evaluate the impact of the disposal area on surface and ground water. Monitoring shall continue for at least twenty-five years after site closure.

12. During the operating life of the site, the permittee shall retain a professional engineer licensed to practice in the State of Connecticut to make quarterly inspections to insure that the site is developed in accordance with the approved plans. The permittee shall submit to the Solid Waste Management Unit on a quarterly basis a report prepared by said engineer which shall include but not be limited to a discussion of the conformance of the disposal area with site plans and requirements regarding method and sequence of cell construction, contours, slope stabilization and erosion and sedimentation control, landscaping, and the results of quarterly gas monitoring as outlined in the approved site plan report.

13. Based upon the site contours measured pursuant to condition #12 above, the permittee shall notify the DEP Solid Waste Unit in writing when the landfill reaches the landform permitted in accordance with the August 12, 1983 Solid Waste Permit.

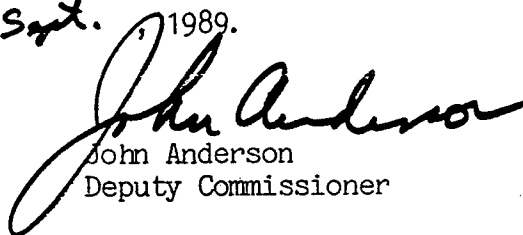
14. The permittee shall maintain closure and post-closure assurance in accordance with law.

15. This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut, and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state, or local laws or regulations pertinent to the property or activity affected hereby.

16. Hazardous wastes shall not be accepted, processed, disposed of or stored at the vertical expansion authorized by this permit.

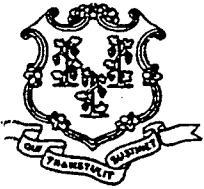
17. The permittee shall comply with all regulations of the Department which are applicable to the operation and maintenance of the disposal area, as amended.

Dated in Hartford, CT. this 1 day of Sept., 1989.


John Anderson
Deputy Commissioner

Solid Waste Permit No. 126-1VA

DATE OF PERMIT ISSUANCE : JANUARY 11, 1990.



STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



LANDFILL CLOSURE AUTHORIZATION

In accordance with Connecticut General Statutes (CGS) Section 22a-208a and Regulations of Connecticut State Agencies (RCSA) Section 22a-209-13, the Department of Environmental Protection (DEP) hereby authorizes the Connecticut Resources Recovery Authority (CRRA) to close the MSW/Interim Ash Area at the CRRA Shelton Landfill located at 866 River Road, Shelton, Connecticut.

1. The closure shall be conducted in accordance with the submittal entitled "Final Closure Plan for MSW/Interim Ash Area Shelton Landfill 866 River Road (Route 110) Shelton, Connecticut", prepared for the CRRA by Golder Associates Inc., dated September 1996 and received by WEED on September 17, 1996.
2. The landfill closure construction, to be done in accordance with the closure plan identified in paragraph one above, shall be completed and the area seeded and stabilized by May 31, 1997.
3. The DEP Bureau of Waste Management shall be notified in writing one week prior to the initiation of site closure construction activities, so that a field inspector may be present.
4. As-built site plans shall be provided upon the completion of the landfill closure in accordance with Sec. 22a-209-13(f) RCSA. The as-built plan shall include certification by a professional engineer registered in the State of CT that the grading and closure is as proposed in paragraph one above. The necessary information shall be filed at town hall on the property records in accordance with Sec. 22a-209-13(g) RCSA.
5. This approval is subject to and in no way derogates any present or future property rights or powers of the State of Connecticut and conveys no property rights in real estate or material nor any exclusive privileges and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.
6. This approval may be revoked, suspended or modified in accordance with law.

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7. When this approval requires that any document be submitted to the DEP, such document shall be delivered to: DEP, Bureau of Waste Management, Waste Engineering and Enforcement Division, 79 Elm Street, Hartford, CT, 06106.

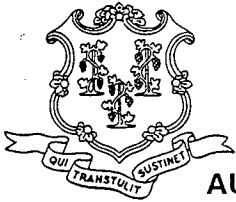
Dated in Hartford, Connecticut this 10th day of October, 1996.



Richard J. Barlow, Chief
Bureau of Waste Management

Certified to be a true copy of a document in the files of the Department of Environmental Protection, Waste Management Bureau.

Name: David McKeegan, III
Title: Environmental Analyst III
Date: 10/10/96



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



AUTHORIZATION FOR THE DISRUPTION OF A SOLID WASTE DISPOSAL AREA

Municipality: Shelton

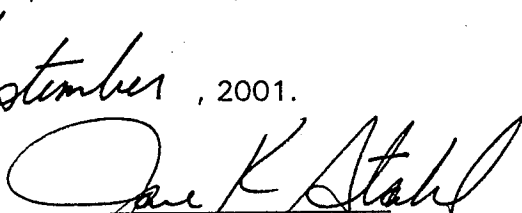
Site of Activity: Shelton Landfill, 866 River Road

Authorization Holder: Connecticut Resources Recovery Authority

Pursuant to Connecticut General Statutes (CGS) Section 22a-208a and Regulations of Connecticut State Agencies (RCSA) Section 22a-209-7(u), the Commissioner of Environmental Protection (Commissioner) hereby issues this approval to the Connecticut Resources Recovery Authority (CRRA) to consolidate and dispose of on-site an estimated 400 cubic yards of waste materials (i.e., soil mixed with waste) generated from the installation of new gas collection wells and associated header system at the CRRA Shelton Landfill located at 866 River Road in Shelton, CT. The work authorized herein shall conform to the terms and conditions of this Authorization.

1. The disruption activities shall take place in accordance with the letter (dated August 31, 2001) with attachment submitted by the CRRA and received by the Department on September 5, 2001.
2. Proper sedimentation and erosion controls, including dust and odor controls, shall be maintained at all times by the CRRA and its contractor(s) during construction activities associated with the disruption of this disposal area.
3. No additional solid waste, other than that specified in the CRRA's August 31, 2001 letter, shall be disposed of at this site as a result of this authorization.
4. This authorization is subject to and in no way derogates any present or future property rights or powers of the State of Connecticut and conveys no property rights in real estate or material nor any exclusive privileges and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.
5. This authorization may be revoked, suspended, or modified in accordance with law.
6. When this authorization requires that any document be submitted to the DEP, such document shall be delivered to: David McKeegan, Bureau of Waste Management, Waste Engineering & Enforcement Division, 79 Elm Street, Hartford, CT 06016-5127.

Issued this 14th day of September, 2001.


Arthur J. Rocque, Jr.
Commissioner

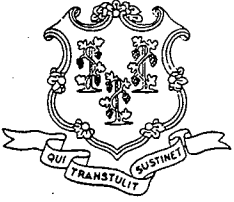
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STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



September 17, 2001

Mr. David Bodendorf
Connecticut Resources Recovery Authority
100 Constitution Plaza, 17th Floor
Hartford, CT 06103-1772

Re: Shelton Landfill, 866 River Road, Shelton, CT
Authorization for Disruption

Dear Mr. Bodendorf:

Enclosed please find a copy of the solid waste authorization for the disruption of the Shelton Landfill located at 866 River Road, Shelton, CT.

If you have any questions concerning the disruption authorization, please contact David McKeegan of the Waste Engineering and Enforcement Division (WEED) at (860) 424-3313.

Sincerely,

Richard J. Barlow
Chief
Bureau of Waste Management

RJB/dm

cc: Mayor Lauretti, City of Shelton
Peter Egan, CRRA

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RECEIVED
CONN. RESOURCES
RECOVERY AUTHORITY



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PERMIT

Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, CT 06103

Attention: Mr. David Brown

Re: DEP/WPC-126-104
Town of Shelton
Housatonic River Watershed

Gentlemen:

This PERMIT is issued in accordance with Section 22a-430 of the Connecticut General Statutes, as amended. The Commissioner of Environmental Protection (hereinafter "the Commissioner") has found that the discharge from the operation and maintenance of the sanitary landfill will not cause pollution of the waters of the state. This action is further found to be consistent with the applicable policies of the Connecticut Coastal Management Act (Section 22a-92 of the Connecticut General Statutes as amended by Section 2 of P.A. 79-535).

The Commissioner, acting under Section 22a-430, hereby permits the Connecticut Resources Recovery Authority (CRRRA) to operate and maintain a sanitary landfill with the resultant leachate discharged to the groundwaters of the state in accordance with the following conditions:

- 1) Discharge Serial No. 001
Description - Sanitary Landfill Leachate (code 305002C)
Discharge Location - Groundwaters in the watershed of the Housatonic River
(basin code 6000)
Design Flow Rate - 74,000 gallons per day
- 2) The sanitary landfill shall be operated and maintained in accordance with the plans and specifications approved by the Director of Water Compliance on December 28, 1984. The sanitary landfill site consists of 110 acres of land located to the east of Route 110 in the Town of Shelton. The permitted area of refuse disposal is 37 acres as shown on the site grading plan prepared by Fuss & O'Neill and dated December 4, 1984.

~~3) The surface and groundwaters shall be monitored as follows:~~

~~A) Surface water quality monitoring shall be conducted at the following locations:~~

- S-1: Lagoon inlet (downstream)
- S-2: Lagoon mid-point (downstream)

Samples shall be obtained on the falling tide approximately midway between high and low tide and be taken at mid-depth in the lagoon.

Each quarterly sample shall be analyzed for the following leachate indicator parameters.

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- | | | |
|---------------------------------|-----------------------------|--------------------|
| 1. total dissolved solids (613) | 8. nitrate (204) | 15. nitrite (203) |
| 2. total suspended solids (614) | 9. chloride (502) | 16. TKN (202) |
| 3. alkalinity (602) | 10. organic nitrogen (205) | 17. copper (111) |
| 4. COD (303) | 11. T.O.C. (306) | 18. zinc (127) |
| 5. total iron (113) | 12. pH (609) | 19. nickel (119) |
| 6. total managanese (116) | 13. conductivity (611) | 20. cadmium(107) |
| 7. ammonia (201) | 14. BOD ₂₀ (302) | 21. lead (114) |
| | | 22. chromium (109) |

~~B) Groundwaters monitoring shall be conducted at the following~~
locations:

- | | |
|---------|---------------|
| W-1: F | (up-gradient) |
| W-2: As | |
| W-3: Ad | |
| W-4: Bs | |
| W-5: C | |
| W-6: E | |
| W-7: | |
| W-9: | |
| W-10: | |

Following measurement of the water level in the monitoring wells, the wells shall be pumped immediately prior to sampling until at least three (3) times the volume of water standing in the well is evacuated to insure that a representative sample of the groundwater is obtained. All ground water samples for metals, COD and volatile organics shall be filtered in the field to remove excess suspended solids. A silty water sample will give false results on the COD and metal analyses. The samples shall be analyzed by a laboratory certified by the State Health Department. All samples shall be placed in the appropriate container for the test to be conducted (i.e. BOD bottle, volatile organics bottle, one-half gallon plastic bottle, etc.).

Each quarterly ground water sample shall be analyzed for the previously listed leachate indicator parameters and the following:

- water level (706)
- volatile organics (annually)

~~C) The domestic water supply wells at the following addresses shall be~~
sampled quarterly:

- PW-1: Lot 5
- PW-2: Lot 151
- PW-3: Lot 152
- PW-4: Lot 153
- PW-5: Lot 172
- PW-6: Lot 173

Each quarterly water sample shall be analyzed for specific conductance (611), chloride (502), total dissolved solids (613), alkalinity (602), ammonia (201), nitrate (204), iron (113), manganese (116) and pH (609).

Tap water should be run vigorously for five (5) minutes prior to sample collection and from a tap which bypasses holding tanks and water treatment systems. Samples shall be placed in the appropriate bottle.

D) This permit condition (C) is binding only if the property owners grant the applicant permission to collect the well water sample.

~~E) The sampling and testing performed according to subparagraphs A, B, and C shall be done according to this schedule:~~

<u>Sampling Date</u>	<u>Reporting Date</u>
January	March 1
April	June 1
July	September 1
October	December 1

~~The results shall be reported to the Solid Waste and Water Compliance Units of the Department of Environmental Protection at the State Office Building, Hartford, Connecticut 06106. A copy of the sampling results shall also be sent to the Health Officer of the town in which the disposal area is located and copies of the private well sampling results shall be sent to the residences of those properties.~~

~~F) Beginning on December 31, 1984 and annually on that date thereafter, a summary report of the monitoring program shall be submitted for the review and approval of the Commissioner. The report shall include an assessment of changing trends in leachate concentration or constituents, impact on adjacent surface waters, changes in plume location, changes in the ground water levels, and impact on nearby water supply wells.~~

4) The zone of influence of the discharge which is hereby permitted is restricted to the property owned by CRRA. The zone of influence is defined as the soil and groundwater area needed to allow the treatment of leachate by soils and mixing of leachate with groundwaters and in which the groundwaters could be in violation of pertinent Federal and State drinking water standards.

5) Within ninety (90) days of the date of this permit, verify to the Commissioner that notice has been placed by the CRRA on the land records of this area as shown in the engineering report dated February 1982, which indicates that groundwaters beneath this parcel are not suitable for drinking without treatment due to the existence of the landfill.

6) Within ninety (90) days of the date of this permit, verify to the Commissioner that refuse monuments have been installed around the perimeter of the refuse disposal area. Refuse monuments shall be at least six (6) feet high, three (3) inches in diameter and permanently anchored to protect against accidental destruction or vandalism.

7) On or before six (6) months of when the metal hydroxide disposal cell will reach its permitted capacity of 10,000 cubic yards, the CRRA shall submit for the review and approval of the Commissioner, plans and specifications for the final disposition of the metal hydroxide sludge.


8) Within one (1) year of the date of issuance of this permit, verify to the Commissioner that a vegetated buffer zone fifty (50) feet wide has been established between the lagoon and the landfill.

9) The monitoring of this landfill shall continue for at least twenty-five (25) years after full and complete closure has occurred.

The PERMIT is issued under Section 22a-430 and shall expire on January 11, 1990.

The PERMIT shall be subject to all the Section 22a-430 General Conditions dated April 27, 1979 which are hereby incorporated into this PERMIT.

Entered as a PERMIT of the Commissioner on January 11, 1985.



Stanley J. Pac
COMMISSIONER

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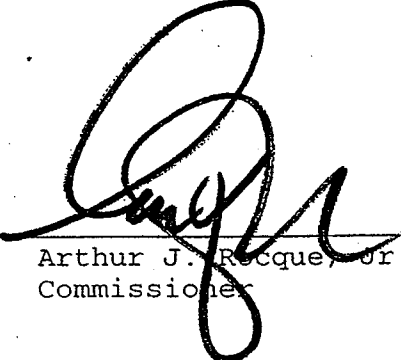
STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR MANAGEMENT

NEW SOURCE REVIEW PERMIT
TO CONSTRUCT AND OPERATE
A STATIONARY SOURCE

Issued pursuant to Title 22a of the Connecticut General Statutes and Section 22a-174-3a of the Regulations of Connecticut State Agencies.

Owner/Operator: Connecticut Resources Recovery Authority
Address: 100 Constitution Plaza, 17th Floor
Hartford, CT 06106-5127
Equipment Location: Shelton Landfill, Route 110
Shelton, CT 06484
Equipment Description: Landfill with Gas Collection System & John Zink
18.6MMbtu Enclosed Landfill Flare

Permit Number: 0091
Town/Premises Numbers: 163/0119
Original Construction Permit Issue Date: October 18, 2001
Original Construction and Operating Permit Issue Date: **APR 26 2002**
Expiration Date: None


Arthur J. Rocque, Jr.
Commissioner

4/26/02
Date

I CERTIFY THAT THIS IS A TRUE COPY OF THE ORIGINAL
Jamie Dougherty 4/26/02

ORIGINAL

**PERMIT FOR MUNICIPAL SOLID WASTE LANDFILL
AND GAS COLLECTION AND CONTROL SYSTEM***

**STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR MANAGEMENT**

The conditions on all pages of this permit and attached appendices shall be verified at all times. Design specifications unless specifically noted elsewhere in this permit need not be verified on a continuous basis. However, demonstration of compliance shall be provided to the Commissioner upon request.

* The landfill's Gas Collection and Control System (GCCS) consists of the following components: 1) one hundred five (105) landfill gas (LFG) collection wells (sixty-three (63) in the central well field & forty-two (42) around the landfill perimeter), 2) lateral piping from the LFG collection wells to a main header, 3) condensate discharge piping, traps, sump, and storage tank, and 4) an enclosed flare (John Zink 18.6 MMbtu ZTOF Landfill Flare). Additions and/or replacements (with similar equipment) intended to improve capture and control of LFG, and remedial actions required by this permit, shall not trigger any permit modification requirements.

PART I. DESIGN SPECIFICATIONS AND OPERATIONAL CONDITIONS: Gas Collection and Control System

A. Design Specifications

1. Fuel Type(s): Landfill Gas
2. Maximum Fuel Consumption over any Consecutive Twelve (12) Month Period (MMft³): 578
3. Trunk Line Fuel Filter Performance Specifications:
 - a. Trunk Line Capture Efficiency (%): 100
 - b. Removal Efficiency (%) at Maximum Flow: 99.5 (> or = to 3 μm)
 - c. Overall Efficiency (%) at Maximum Flow: 99.5 (> or = to 3 μm)
4. Maximum Fuel Firing Rate (scfm): 1,030
5. Minimum Allowable Combustion Temperature (°F): 1,400
6. Minimum Residence Time (seconds): 0.9 @ 1,600°F
7. Maximum Gross Heat Input (MMBTU/hr): 18.6 (@ Estimated LFG Heat Content of 300 BTU/ft³)
8. Minimum Stack Height (ft): 40
9. Maximum Exhaust Gas Flow Rate (acfm): 37,198
10. Minimum Distance from Stack to Property Line (ft): 140
11. Operating Hours: 24 hours/day; 8,760 hours per year

B. The following operating conditions shall be met at all times:

1. The enclosed flare's minimum destruction efficiency for non-methane

FIRM NAME: Connecticut Resources Recovery Authority
EQUIPMENT LOCATION: Shelton Landfill, Route 110, Shelton, CT 06484
EQUIPMENT DESCRIPTION (MODEL, I.D. #): Landfill with Gas Collection System and Enclosed Flare (John Zink 18.6 MMbtu ZTOF Flare Landfill Flare)

Town No: 163

Premise No: 119

Permit No: 0091

Stack No: 01

ORIGINAL

**PERMIT FOR MUNICIPAL SOLID WASTE LANDFILL
AND GAS COLLECTION AND CONTROL SYSTEM**

STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR MANAGEMENT

PART I. DESIGN SPECIFICATIONS AND OPERATIONAL CONDITIONS, CONTINUED:

organic compounds shall be 98% or an NMOC outlet concentration of 20 ppm by volume dry basis as hexane at 3% oxygen.

2. The enclosed flare shall be designed for and operated with no visible emissions as determined by Reference Method 22, Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.
 3. The permittee shall install, operate and maintain a flare pilot flame and associated pilot fuel supply to assure the timely, automatic restart of the landfill flare.
 4. The enclosed flare shall be operated with a flame present at all times except as required during maintenance. The presence of a flare flame shall be monitored by a UV scanner or other equivalent device.
 5. The enclosed flare shall be operated in accordance with the manufacturer's specifications and recommendations.
- C. The permittee shall ensure effective and safe operation of the LFG collection system through compliance with the following operational conditions:
1. Monthly checks of all wells to ensure wellhead vacuum and proper wellhead operation is maintained. Should the positive pressure exist at a wellhead, the permittee shall take remedial action in accordance with 40 CFR 60.755(a)(3).
 2. Monthly confirmation at each central wellhead demonstrating both N₂ levels are below 20% and O₂ levels are below 5%. Should the N₂ level equal or exceed 20% and O₂ level equal or exceed 5%, the permittee shall take remedial action by reducing or shutting off the vacuum to that well until such time as either the oxygen or nitrogen level drops below the relevant threshold.
 3. Monthly monitoring of central wellhead LFG temperature to ensure LFG temperature is maintained below 55°C (131°F). If the temperature of a well exceeds 130°F, the permittee shall shut off the vacuum to the well. If positive pressure is measured at a high temperature well, the permittee may open the valve to the well to relieve the high pressure, regardless of temperature. The permittee shall not place the well under vacuum until such time as the temperature is below 131 °F.
 4. Monitoring of landfill surface methane concentrations to demonstrate that methane concentrations at any location on the landfill surface do not exceed 500 ppmv above background in accordance with the provisions of 40 CFR 60.755(c). The permittee shall conduct the first monitoring demonstration, over the entire landfill surface, no later than 30 days

FIRM NAME: Connecticut Resources Recovery Authority
EQUIPMENT LOCATION: Shelton Landfill, Route 110, Shelton, CT 06484
EQUIPMENT DESCRIPTION (MODEL, I.D. #): Landfill with Gas Collection System and Enclosed Flare (John Zink 18.6 MMbtu ZTOF Flare Landfill Flare)

Town No: 163

Premise No: 119

Permit No: 0091

Stack No: 01

ORIGINAL

**PERMIT FOR MUNICIPAL SOLID WASTE LANDFILL
AND GAS COLLECTION AND CONTROL SYSTEM**

STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR MANAGEMENT

PART I. DESIGN SPECIFICATIONS AND OPERATIONAL CONDITIONS, CONTINUED:

after the receipt of the permit to construct. Subsequent to the initial demonstration, the permittee shall conduct methane landfill surface monitoring quarterly.

All locations exceeding 500 ppmv above background in any round of monitoring shall be monitored and remediated in accordance with the provisions of 40 CFR Part 60.755(c)(4). As long as the actions specified in 40 CFR part 60.755(c)(4) are taken, the exceedance is not a violation of the operational requirements of this permit.

If there are no monitored exceedances of this operational requirement for three (3) consecutive quarterly monitoring periods, thereafter the permittee shall conduct methane landfill surface monitoring annually. However, if there is an exceedance of the 500 ppm above background detected during annual monitoring, the specific location(s) exceeding 500 ppmv above background shall be monitored and remediated in accordance with the provisions of 40 CFR Part 60.755(c)(4). All other locations below the 500 ppm above background threshold may stay on the annual monitoring schedule.

The permittee shall not be required to conduct periodic methane landfill surface monitoring when the landfill is snow covered.

5. Prompt shutdown of GCCS blower whenever the enclosed flare or other in place controls are inoperable in accordance with the provisions set forth in 40 CFR 60.753(e). However, in order to prevent LFG migration, the GCCS blower may be operated when the emergency by-pass is operated.
- D. The permittee shall operate the collection system with negative pressure at each central well field wellhead except as provided in 40 CFR 60.753(b).
- E. All flare operating personnel shall be trained on the operation of the flare according to the manufacturer's operating procedures and trouble shooting techniques.
- F. The GCCS shall be operated and maintained only by personnel properly trained in its operation.

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Premise No: 119

Permit No: 0091

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PART II. ALLOWABLE EMISSION LIMITS: (GCCS)

The permittee shall not allow emissions from this source to exceed the emission limits stated herein at any time. Final emission limits may be established upon completion of initial compliance testing required herein and the Commissioner's acceptance of the test results.

<u>Criteria Pollutants</u>	<u>#/MMBtu</u>	<u>TPY</u>
TSP (Flare)	0.02	1.4
PM-10 (Flare)	0.02	1.4
SO _x (Flare)	0.06	4.9 ¹
NO _x (Flare)	0.06	4.9
VOC (Flare)	0.007	0.6
VOC (Fugitive Emissions) ²	NA	3.2 ²
CO (Flare)	0.20	16.2

¹ The ton per year limitation for SO_x is not an enforceable permit condition. However should source testing indicate the annual SO_x emission is greater than five (5) tons per year the permittee shall perform a BACT analysis as required in Part VI, Item I of this permit.

² Fugitive VOC emissions are the VOC in the landfill gas not captured by the gas collection system; this annual emission rate need not be verified by the permittee.

Demonstration of compliance with the above emission limits shall be met by calculating the emission rates using emission factors from the following sources:

- A. Initial Compliance Demonstration Test Data
- B. Manufacturer's Emissions Data
- C. AP-42, Fifth Edition, Section 2.4
- D. SO_x emissions based on 97% overall oxidation of sulfur compounds contained in the waste gas and 97% overall oxidation of reduced sulfur to oxides of sulfur

**Non-Criteria
Pollutants**

The Permittee shall not allow emissions of any Hazardous Air Pollutant listed on any Table in Section 22a-174-29 of the Regulations of Connecticut State Agencies (hereinafter referred to as RSCA) and emitted from this flare to exceed the Maximum Allowable Stack Concentration ("MASC") as determined pursuant to the provisions of Section 22a-174-29 of the RSCA and Equation 1:

$$\text{MASC } (\mu\text{g}/\text{m}^3) = \frac{0.885 * (\text{HLV}) * [X + 1.08 * V^{.64}]^{1.56}}{V} \quad \text{<Equation 1>}$$

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PART II. ALLOWABLE EMISSION LIMITS, CONTINUED:

where:

HLV= Hazard Limiting Value for each specific HAP emitted from the operation of the flare ($\mu\text{g}/\text{m}^3$)

V= The exhaust gas flowrate exiting the stack (actual m^3/second)

X= The distance from the stack to the nearest property line (meters)

or simply:

$$\text{MASC (ug/m3)} = 22.1 \times (\text{HLV}) \qquad \text{<Equation 2>}$$

Equation 2 is derived using the maximum exhaust flow rate of 37,198 acfm ($V = 17.55 \text{ m}^3/\text{sec}$) and a minimum property line distance of 140 feet ($x = 42.67 \text{ meters}$).

For any operating period having a duration greater than 30 minutes but less than 8 hours, the Permittee may demonstrate compliance with an adjusted MASC calculated in accordance with Section 22a-174-29(i) of the RSCA; provided that actual emissions during each and every period of eight (8) consecutive hours do not exceed the value of MASC determined using the 8-hr HLV for the Hazardous Air Pollutants emitted.

Nothing in Parts II, III, or IV of this permit shall preclude the Commissioner from requiring other means (e.g. stack testing) to demonstrate compliance with Section 22a-174-29 of the RSCA, as allowed by state or federal statute, law, or regulation.

PART III. MONITORING, REPORTING AND RECORD KEEPING REQUIREMENTS:

- A. The permittee shall install, operate and routinely calibrate a device or devices to continuously measure and monitor the volumetric flow of waste gas into this flare.
- B. The permittee shall record the quantity of waste gas burned by this flare during each calendar month. Such records shall include the date of the recording period and the quantity of waste gas, expressed in units of million cubic feet per month.
- C. The permittee shall record the quantity of pilot fuel burned (propane or natural gas) by the flare during each calendar month. Such records shall include the date of the recording period and the quantity of pilot fuel. Fuel records may be used to calculate the amount of pilot fuel burned.

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PART III. MONITORING, REPORTING AND RECORD KEEPING REQUIREMENTS, CONTINUED:

- D. The permittee shall install and operate a device or devices to measure and monitor the number of hours of flare operation during each calendar month.
- E. The permittee shall record the number of hours of flare operation during each calendar month. Such records shall include the date of the recording period and the number of flare operating hours during each recording period.
- F. The permittee shall maintain monthly records of all criteria pollutant emissions calculations and supporting documentation to demonstrate compliance with the annual emission limitations set forth in Part II of this permit. Such records shall assure that the annual emissions of each criteria pollutant can be calculated over any rolling 12-month period.
- G. The permittee shall maintain records of all GCCS maintenance and calibration operations listed in Part I. of this permit as detailed in the facility's amended Operations and Maintenance Plan.
- H. The permittee shall maintain a complete record of all monitoring conducted pursuant to Part I. C. of this permit and all testing conducted pursuant to Part IV of this permit as well as any periodic testing required in the facility's amended Operations and Maintenance Plan.
- I. The permittee shall retain any records required under this permit for a period of no less than five (5) calendar years. All records shall be made available to the Commissioner or his agent upon request.
- J. The permittee shall submit a report annually to the CTDEP Compliance Assurance and Coordination Unit of the Bureau of Air Management detailing all exceedances of operational conditions monitored pursuant to Part I, Item C (1-5) of this permit. Such report shall include the remedial action taken by the permittee. The first of such reports shall be due 13 months after the issuance of the permit to operate.

PART IV. SOURCE TEST REQUIREMENTS: (Applicable if -X-Checked)

Source testing shall be required for the following pollutant(s):

- None at this time TSP¹ SOx¹ NOx¹ CO¹
- VOC^{1,2} (as NMOC) PM-10 Pb Other: (HAPS^{2,3})

¹ Flare Outlet Measurement

² Flare Inlet Measurement

³ HAP measurements and MASC compliance demonstrations shall include the following HAPs common to MSW landfills: acetone, acrylonitrile, benzene, bromodichloromethane, butane, carbon disulfide, carbon tetrachloride, carbonyl sulfide, chlorobenzene, chlorodifluoromethane, chloroethane, chloroform, chloromethane, dichlorobenzenes,

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PART IV. SOURCE TEST REQUIREMENTS, CONTINUED:

dichlorodifluoromethane, 1,1-dichloroethane, 1,2-dichloroethane, trans 1,2-dichloroethene, dichlorofluoromethane, dichloromethane, dimethylsulfide, ethane, ethanol, ethyl mercaptan, ethylbenzene, ethylene dibromide, fluorotrichloromethane, hexane, hydrogen sulfide, mercury, methyl ethyl ketone, methyl iso-butyl ketone, methyl mercaptan, pentane, propane, 2-propanol, propylene dichloride, 1,1,2,2-tetrachloroethane, tetrachloroethylene, toluene, 1,1,1-trichloroethane, trichloroethylene, vinyl chloride, vinylidene chloride, and xylenes

A. Pre-LFG Characterization and Stack Emissions Test, LFG Collection System Remediation and Assessment:

1. The permittee shall complete the landfill gas collection system remediation in accordance with the following timetable:
 - a. Replacement of Well Head Valves by August 31, 2001 (Designated as Wells GW 2, GW3, GW8, GW15, GW17, GW18, GW19, GW21, GW22, GW23, & GW42 on Drawing 1 of 2, Dated 6/29/01)
 - b. Installation of new side slope wells by October 31, 2001 (Designated as wells GW 70, GW 71, GW72, GW 73, & GW 74 on Drawing 1 of 2, Dated 6/29/01)
 - c. Installation of new perimeter wells by October 31, 2001 (Designated as wells 45, 46, 47, & 48 on Drawing 1 of 2, Dated 6/29/01)
2. The permittee shall conduct a complete assessment of the effectiveness of the central well field within sixty (60) days of receipt of the permit to construct or completion of work under section IV.A. of this permit, whichever occurs later. Such assessment shall be submitted in writing to the Commissioner for review and approval forty-five (45) days after completion of the assessment. The assessment shall provide a determination as to whether or not a minimum of 90% of the LFG wells in the central well field are fully operational at that time. A fully operational well shall be defined as a well where negative pressure is maintained. The amount of vacuum applied to each well head shall be left to the discretion of the permittee.
3. Should the assessment detailed in Item 1 above indicate that less than 90% of the LFG wells in the central well field are fully operational, the permittee shall submit in writing to the Commissioner for review and approval an LFG collection system remediation plan. Such plan shall set forth those steps with associated timelines to bring the central well field to a minimum level of 90% operational effectiveness. Weather permitting, the permittee shall take all reasonable action to assure such LFG collection system remediation is completed within one hundred eighty (180) days of Commissioner's approval of the LFG collection system

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PART IV. SOURCE TEST REQUIREMENTS, CONTINUED:

remediation plan. The permittee shall notify the Commissioner in writing within one hundred fifty (150) days of the Commissioner's approval of the LFG collection system remediation plan if the permittee believes that the remediation of the LFG collection system can not be completed within the one hundred eighty (180) day period required above. Such notification shall include a revised timeline for the remediation of the LFG collection system as well as amended timelines for the submittal of a source test protocol, commencement of LFG characterization and source testing, and submittal of the LFG characterization and source test report.

4. Except as provided above, the permittee shall submit, to the Stack Test Group, a source test protocol to conduct the LFG characterization and source emission testing required in Items B and C below within one hundred eighty (180) days of the receipt of the permit to construct. All testing required in Items B and C below shall be completed within sixty (60) days of system start-up or DEP approval of the test protocol, whichever occurs later. The final report of such testing shall be submitted to the Stack Test Group no later than 45 days after the completion of the stack test.
5. All testing shall be conducted in accordance with the general guidelines of Attachment B of this permit unless specifically amended above. The following site-specific testing shall be required:

B. LFG Characterization¹

1. Characterization of LFG with respect to total reduced sulfur, NMOC, methane, oxygen, nitrogen, and hazardous air pollutants (HAPs) common to municipal solid waste (MSW) landfills listed in footnote 3 of Part IV
2. Mass spectral tentative identification of HAPs not specifically listed above
3. Measurements of the GCCS LFG collection rates (scfm) and estimates of the gas collection system capture efficiency and total LFG production

C. Stack Emissions Testing (Enclosed Flare)¹

1. Permit compliance demonstration of VOC (as NMOC) destruction efficiency
2. Permit compliance demonstrations for HAP, TSP, NO_x and CO flare emission rates and measurement of SO_x to determine the annual emission rate

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PART IV. SOURCE TEST REQUIREMENTS, CONTINUED:

D. Periodic Stack Emissions Testing (Enclosed Flare)¹

The permittee shall conduct a permit compliance demonstration for NO_x and CO flare emission rates every five years.

¹ The permittee shall verify that a minimum of 90% of LFG wells in the central well field of the GCCS network are fully operational 24 hours prior to the initiation of LFG characterization and stack emissions testing.

PART V. APPLICABLE REGULATORY REFERENCES: (The Regulations of Connecticut State Agencies)

22a-174-3(a), (b), (f); 22a-174-18; 22a-174-19; 22a-174-29(b); 22a-174-22

These references are not intended to be all inclusive - other sections of the Regulations may apply.

PART VI. SPECIAL REQUIREMENTS:

- A. The permittee shall operate and maintain the GCCS in accordance with the manufacturer's specifications and written recommendations.
- B. The permittee shall operate the landfill and GCCS at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in Sections 22a-69-1 through 22a-69-7.4 of the RSCA.
- C. The permittee shall comply with state odor regulations, as set forth in Section 22a-174-23 of the Regulations.
- D. The permittee shall maintain the landfill surface (i.e. cover material) and/or replace, modify or supplement all components of the gas collection system as required to assure effective LFG collection to prevent nuisance odors, and to minimize the venting of LFG at the landfill surface.
- E. The permittee shall comply with all applicable sections of 40 CFR Part 62, subpart GGG.
- F. The amended Operations and Maintenance Plan shall be submitted to the Commissioner for review and approval within ninety (90) days of the effective date of the permit to construct.
- G. The replacement, repair, addition, or retirement of any LFG well(s) or components (provided such components, if replaced, are replaced with components of equivalent design and performance specifications), and any remedial action taken pursuant to the terms of this permit, shall not require a modification of this permit.

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PART VI. SPECIAL REQUIREMENTS, CONTINUED:

- H. The permittee shall not inject LFG condensate and/or landfill leachate into the enclosed flare.
- I. The permittee shall submit a Top-Down BACT analysis for SO_x and/or NO_x if the initial performance test indicates that SO_x and/or NO_x emissions exceed 5 TPY or such level as may be required by the Commissioner.
- J. Except as provided in the Public Use and Recreation Plan approved by the Commissioner, the permittee shall restrict the public from uncontrolled access to any location on the premise/landfill.

PART VII. ADDITIONAL TERMS AND CONDITIONS:

- A. This permit does not relieve the permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the permittee of other obligations under applicable federal, state and local law.
- B. Any representative of the DEP may enter the permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.
- C. This permit may be revoked, suspended, modified or transferred in accordance with applicable law.
- D. This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and - conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons or municipalities who are not parties to this permit.
- E. Any document, including any notice, which is required to be submitted to the Commissioner under this permit shall be signed by a duly authorized representative of the permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in the documents and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true,

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PART VII. ADDITIONAL TERMS AND CONDITIONS, CONTINUED:

accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense." Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense in accordance with Connecticut General Statutes §22a-6, under §53a-157 of the Connecticut General Statutes.

- F. Nothing in this permit shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the permittee by the Commissioner.
- G. Within fifteen days of the date the permittee becomes aware of a change in any information submitted to the Commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the permittee shall submit the correct or omitted information to the Commissioner.
- H. The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.
- I. Any document required to be submitted to the Commissioner under this permit shall, unless otherwise specified in writing by the Commissioner, be directed to: Office of Assistant Director; Compliance & Field Operations Division; Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

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Appendices attached (Applicable if -X- checked)

- B Stack Emission Test Requirements
- C New Source Performance Standards
- E Control Equipment Specifications

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Appendix B: SOURCE STACK TESTING GENERAL REQUIREMENTS

The owner/operator shall conduct stack testing within sixty (60) days of achieving the maximum production rate, but not later than one hundred-eighty (180) days after initial start up, unless specified otherwise within this permit.

Pursuant to the Regulations of Connecticut State Agencies, the owner/operator of this facility shall submit an Intent-to-Test (ITT) package consisting of an ITT form (Form AE404) and a test protocol. The test protocol shall be consistent with the Bureau's Emission Source Test Guideline specifying the test methodology to be followed and the conditions under which the process and its control equipment will be operated. The process shall be operated at a minimum of 90% of the permitted maximum rated capacity and the control equipment shall be operated as specified in this permit.

All proposed test methods shall comply with appropriate Federal test methods or methods acceptable to the Bureau. The ITT package must demonstrate compliance with applicable requirements of the Code of Federal Regulations (CFR) Title 40 Parts 51, 60 and 61. Any proposed test methods that deviate from those specified in these regulations must be approved by the Bureau prior to stack testing. All sampling ports shall be installed and located in compliance with 40 CFR Part 60 Appendix A, Method 1. Final plans showing the location of all sampling ports shall be submitted with the ITT package to the Air Bureau's Stack Test Group for approval prior to stack testing. Please submit an original and one copy of the ITT package to: Bureau of Air Management, New Source Review Section, 79 Elm Street, 5th Floor, Hartford, Connecticut 06106-5127.

An inspection of the source may be conducted to verify that appropriate instrumentation is available, and to determine the source process parameters, indicative of compliant operation, to be monitored during stack testing. Once the ITT package is approved, the owner/operator shall be notified, in writing, by the Bureau's Stack Test Group.

The source test must be scheduled, monitored by Bureau personnel, and completed within sixty (60) days from the date of Bureau approval of the proposed ITT package. It is the source's responsibility to conduct preparatory testing for tuning or debugging purposes prior to the Bureau-monitored stack testing. An acceptable test report must be submitted to the Bureau within forty-five (45) days of the completion of emissions testing. The owner/operator shall respond to any test report deficiency within fifteen (15) days of notification by the Bureau.

Acceptable test results will be incorporated into the final permit to operate. In the event that the stack test report is unacceptable, or the tested values show that the source is not in compliance with applicable permit conditions or regulations, a final permit to operate will be not be issued until the owner/operator responds to and corrects any deficiencies. The Bureau may issue an Administrative Order if there is a likelihood that the source may demonstrate compliance through a process modification and a retest.

APPENDIX E
Control Equipment

Air Pollution Control Equipment (applicable if -X- checked).

The following specifications need not be verified on a continuous basis, however, if requested by the Bureau, demonstration shall be shown.

- None
- Scrubber

Make and Model: _____
Reagent: _____
Reagent Flow Rate: _____
Pressure Drop (in H₂O): _____
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm): _____
PH: _____
Design Outlet Grain Loading (gr/dscf): _____
Design Removal Efficiency (%): _____

A. *Enforceable Conditions* - The following shall be verified at all times.

- Fabric Filter

Pressure Drop, range (in. H₂O): _____

B. *Design Specifications* - The following specifications need not be verified on a continuous basis, however, if requested by the Bureau, demonstration of compliance shall be shown.

- Fabric Filter

Make and Model: _____
Number of Bags in Use: _____
Air/Cloth Ratio: _____
Bag Material: _____
Cleaning Method: _____
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm): _____
Design Removal Efficiency (%): _____

- Wet Dust Suppression (ultrasonic or equivalent)

Number of Nozzles: _____
Water Flow Rate: _____
Location: _____

- Electrostatic Precipitator (ESP)

Make and Model: _____
Number of Fields: _____
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm): _____
Design Outlet Grain Loading (gr/dscf): _____
Design Removal Efficiency (%): _____

APPENDIX E
Control Equipment

- Afterburner (Enclosed Flare)
Make and Model: John Zink 18.6 MMBtu ZTOF Landfill Flare
Minimum Operating Temperature (°F): 1,400
Minimum Residence Time (sec): 0.9 @ 1,600 °F
Minimum VOC/HC Destruction Efficiency (%): 98
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm): 37,198

- Other - Minimum Fuel Pre-Filter Performance Specifications:
Trunk Line Capture Efficiency (%): 100
Trunk Line Removal Efficiency (%) at Maximum Flow: 99.5 (> or = to 3 micrometers (µm))
Trunk Line Overall Efficiency (%) at Maximum Flow: 99.5 (> or = to 3 micrometers (µm))

Control Equipment Malfunction

1. Equipment or methods which control "air pollutant" "emissions" from a "stationary source" and which are necessary to the operation of such "stationary source" in compliance with applicable "emission standards" and regulations shall be maintained in operation at all times that the "stationary source" is in operation or emitting "air pollutants". This includes instruments required by permit, order, or regulation which measure those source operating parameters which affect air pollutant emissions, air pollution control equipment, or other instruments which measure meteorological data required by permit, order or regulation.

2. No "person" shall deliberately shut down any such control equipment, method or other instruments specified in subsection 22a-174-7(a) while the "source" is in operation except for such necessary maintenance as cannot be accomplished when the "stationary source" itself is not in operation and is not emitting "air pollutants".

3. In the event of breakdown, failure, or deliberate shut down of any control equipment, method, or other instrument specified in subsection 22a-174-7(a) during which time the "stationary source" will be in operation, all reasonable measures shall be taken to assure resumption of the control equipment as soon as possible. Due diligence shall be exercised to minimize "emissions" while the control equipment or method is inoperative. In the event such shutdown of control equipment or methods is expected or may reasonably be expected to continue for longer than 72 hours, and if the "source" is to be operated at any time during that period, the "Commissioner" shall be notified within twenty-four (24) hours or by 10 o'clock a.m. (10:00am) the following business day, whichever is later. Such notice shall include, but is not limited to, the following:
 - a. Identification of the specific equipment or instrument taken out, or to be taken out, of service as well as its location, and, where applicable, registration or permit number;

APPENDIX E
Control Equipment

- b. The expected length of time that the "air pollution" control equipment or instrument will be out of service;
 - c. The nature and quantity of "emissions" of "air pollutants" likely to be emitted during the shutdown period;
 - d. Measures such as the use of offshift labor and equipment that will be taken to minimize the length of the shutdown period;
 - e. The reasons that it would be impossible or impractical to shut down the "stationary source" operation during the maintenance period;
4. The "Commissioner" may attach conditions to the operation of the "source" during the period of shutdown or breakdown.

Town No: 163

Premise No: 119

Permit No: 0091

Stack No: 01

ORIGINAL



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PERMIT TO CONSTRUCT

Pursuant to Connecticut General Statutes (CGS) Sec. 22a-208a and Regulations of Connecticut State Agencies (RCSA) Secs. 22a-209-4, 22a-209-7, and 22a-209-14, the Commissioner of Environmental Protection (Commissioner) hereby issues this permit to the Connecticut Resources Recovery Authority (CRRA) as Permittee to construct a horizontal expansion of its solid waste disposal area, as described herein, at the Shelton landfill, 866 River Road, Shelton, CT (the "facility"). The facility shall be operated by the Permittee. The facility shall be utilized solely for the disposal of residue from the Bridgeport Resources Recovery Project or other special wastes with the prior written approval of the Commissioner. Hazardous wastes shall not be accepted, processed, disposed of or stored at this facility.

CONSTRUCTION REQUIREMENTS

1. The facility shall be constructed in accordance with the following:
 - A. Report Entitled "Shelton Landfill Horizontal Expansion Development/Design Report Ash Monocells 866 River Road (Route 110)-Shelton, Connecticut" prepared by Fuss & O'Neill, Inc., July 1990, received by Waste Engineering & Enforcement Division (WEED), Solid Waste Section July 31, 1990, revised to January, 1992 (Volume I, Book I of II).
 - B. Report Entitled "Shelton Landfill Horizontal Expansion Development/Design Report Ash Monocells 866 River Road (Route 110) Shelton, Connecticut" Fuss & O'Neill, Inc., July 1990, revised to January 1992 (Volume I, Book II of II), with Sheet 1 of 18 revised to 2/14/92.
 - C. Report Entitled "Shelton Landfill Horizontal Expansion 866 River Road (Route 110) Shelton, Connecticut, Certificate of Need Information and Documentation" Fuss & O'Neill, Inc., July 1990, revised to January 1992 (Volume II).
 - D. Report Entitled "Shelton Landfill Horizontal Expansion State Discharge Permit Application (SPDES) Pretreated Ash Leachate 866 River Road (Route 110) Shelton, Connecticut" Fuss & O'Neill, Inc., June 1990, revised to January 1992 (Volume III).
 - E. Report Entitled "Ash Leachate Treatability Review For The Horizontal Expansion to the Shelton Landfill, Shelton, CT For Connecticut Resources Recovery Authority" Fuss & O'Neill, Inc., June 1990, (Volume III, Appendix A).
 - F. Report Entitled "Shelton Landfill Horizontal Expansion State Discharge Permit Application (SPDES) Ground Water Discharge 866 River Road (Route 110) Shelton, Connecticut" Fuss & O'Neill, Inc., June 1990, revised to January, 1992 (Volume IV).

Phone:

165 Capitol Avenue • Hartford, Connecticut 06106

- G. Report Entitled "Shelton Landfill Horizontal Expansion 866 River Road (Route 110) Shelton, Connecticut National Pollutant Discharge Elimination System Permit Application (NPDES) Storm Water Discharge" Fuss & O'Neill, Inc., January 1991, revised to January 1992 (Volume V).
 - H. Report Entitled "Shelton Landfill Horizontal Expansion Future Public Use and Recreation Plan 866 River Road (Route 110) Shelton, Connecticut" Fuss & O'Neill, Inc., July 1990, revised to January 1992 (Volume VII).
 - I. Letter and supporting design plans from Lawrence J. Murphy, P.E., Fuss & O'Neill, Inc. to Chris Recchia, Director of Environmental Programs, Connecticut Resources Recovery Authority (CRRA) dated January 27, 1992, including design drawing "Alternative Liner 'A'" regarding the bottom liner design and Plates No. 9, 9A and 11 and Sheets No. 9 and 10 of 18 regarding construction of leachate collection and detection piping system.
 - J. Sheet No. 13 of 18 (revised to February 6, 1992) enclosed in report from Jeff Gernand, Fuss & O'Neill, Inc., to Elsie Patton, DEP Water Management Bureau dated February 6, 1992 establishing the elevation of the bottom liner.
2. In particular, the facility shall be constructed in accordance with the following design features which may incorporate alternative technologies as defined under Section 22a-209-7(x)(2) RCSA:
- A. Liner design on shared municipal solid waste sideslopes in accordance with paragraph 1.A above.
 - B. The balance of the liner design and leachate collection system in accordance with paragraph 1.I above.
 - C. A final slope not exceeding a ratio of 1:3 (one vertical on three horizontal) and utilizing erosion control techniques detailed within paragraphs 1.A and 1.B above, in lieu of reverse bench terraces.
3. Quality assurance shall be provided as follows during construction:
- A. Retention of Quality Assurance Consultant: At all times during the site preparation and liner installation, including the bottom and top liner systems, the Permittee shall retain the services of a Quality Assurance Consultant (QAC) to document that the liner production and installation is in accordance with applicable plans and specifications. The QAC shall be independent from the Permittee, project manager, project design engineer, manufacturer(s) and installer(s).
 - B. Preparation and Approval of Quality Assurance Plan: Sixty (60) days prior to commencing site preparation, the Permittee shall submit to the Commissioner for review and written approval a detailed Quality Assurance Plan (QAP) developed specifically for this project. The QAP shall outline the duties of the QAC in detail, including but not

limited to the titles and position descriptions of all personnel which will be working on the project and the responsibilities of such personnel. The QAP shall identify the respective responsibilities of the QAC, the project manager, the project design engineer, manufacturer(s) and installer(s) for observing and documenting activities related to liner system installation. In addition, the QAP shall include but not be limited to procedures for testing and reporting on the integrity of all geotextiles utilized in the construction of the facility under both on-site and laboratory testing conditions, procedures for observing and reporting on all site preparation activities including any excavation and soil material installation, and other details as necessary to ensure adequate quality assurance at the site.

- C. Approval of QAC: On or before thirty (30) days after issuance of this permit, the Permittee shall retain a QAC acceptable to the Commissioner to implement the QAP approved by the Commissioner pursuant to paragraph B above, and shall, by that date, notify the Commissioner in writing of the identity of such QAC, and submit to the Commissioner a description of such QAC's relevant education, experience and training. Permittee shall retain a QAC acceptable to the Commissioner until facility construction is completed, and, at least 30 days before retaining any QAC other than one originally identified under this paragraph, Permittee shall notify the Commissioner in writing of the identity of such other QAC. The QAC retained shall, at a minimum, have experience as the QAC for four (4) double-lined membrane underliner systems at solid waste disposal areas in the eastern United States. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable QAC unacceptable.

OPERATION & MAINTENANCE REQUIREMENTS

4. The Permittee shall operate and maintain the facility in accordance with all site development, operation and management, erosion and sedimentation control, landscaping and other plans approved by the Commissioner.
5. The Permittee shall dispose of residue only on those portions of the property delineated for that purpose, as shown on Sheet Numbers 1 of 18, 9 of 18 (revised to 1/21/92), 10 of 18 (revised to 1/21/92), and H1-H4 inclusive in paragraph 1.B above. The disposal shall be accomplished in strict accordance with the facility operation and management plan (paragraph 1.A above) and applicable regulations, including without limitation Sections 22a-209-2 through 22a-209-8 and Section 22a-209-14 RCSA.
6. The residue shall be monofilled in accordance with section 22a-209-14 RCSA. The facility shall be graded, covered, and seeded in accordance with the approved plans and that section, as modified by paragraph 10 below. All sources of final cover material shall be approved by the Department.
7. Prior to commencing any residue disposal operations in the expansion areas identified as Southeast Area and Northeast Area on Sheet 1 of 18 of the site engineering plans (paragraph 1.B above) (the "expansion areas"), the

Permittee shall submit to the Commissioner as-built plans of the prepared area showing backfill, elevations of fill, and measured maximum high water table.

The area identified as Northeast Area on Sheet 1 of 18 of the site engineering plans (paragraph 1.B above) shall not be utilized for the disposal of residue until the Commissioner approves in writing said as-built plans as conforming to the site engineering plans and all necessary approvals and permits pursuant to 22a-430 CGS have been received.

8. Prior to commencing residue disposal in the expansion areas, the Permittee shall install permanent liner limit markers in accordance with Section 22a-209-14(g)(1)(c)(ii) RCSA.
9. Prior to commencing residue disposal in the expansion areas, the Permittee shall install the storm runoff and erosion control measures described in the site operation and management plan (paragraph 1.A above).
10. The Permittee shall operate the facility in accordance with the following procedures, which may incorporate alternate technologies under Section 22a-209-7(x)(2) RCSA:
 - A. Management of snow as specified in the report referenced in paragraph 1.A above.
 - B. Completion of final cover construction as specified within paragraphs 1.A and 1.B above within six months of completing the final lift of any portion of the facility.
 - C. Provision of daily cover as specified in Section 22a-209-7(1)(2) RCSA, until such time as the Commissioner may grant final approval for the use of a synthetic daily cover material at the Wallingford CRRA landfill, at which time the Permittee shall be granted written approval to utilize the same synthetic daily cover material at this facility.

HOST COMMUNITY EQUITY ADJUSTMENT

11. The Permittee shall pay to the City of Shelton a host community equity adjustment payment in the amount of \$3.57 per ton for each ton of ash residue disposed under the terms of this permit. The payment for tons delivered during each quarter in the Bridgeport Project's fiscal year shall be made to the City within 30 days after the end of that quarter. This host community equity adjustment shall be reduced by any amount which the Permittee pays to the City under Section 22a-282 CGS.

INSPECTIONS, REPORTS, MONITORING, SURETY

12. For the life of the facility operation, the Permittee shall retain the services of a professional engineer registered in Connecticut to inspect the facility on a quarterly basis and insure that the Permittee is developing the facility in strict accordance with the site operation and

management plans (paragraph 1.A above). Within 30 days after each inspection, the Commissioner shall be furnished a copy of the engineer's inspection report which includes, but is not limited to, a discussion of conformance with site plans, contours, slope stabilization, erosion and storm runoff control, inspection and maintenance of sediment ponds, and sequence of cell construction as outlined in the site operation and management plan.

13. The Permittee shall submit to the Commissioner quarterly reports of the tonnage of residue delivered to the facility, the volume of facility capacity utilized for disposal of residue, and information on the liner system operation, including but not limited to the volume and quality of collected leachate and the extent of liner leakage.
14. The Permittee shall comply with the ground and surface water quality monitoring program as may be required in any permit issued by the Commissioner pursuant to Section 22a-430 CGS for the facility. Monitoring shall continue for at least thirty (30) years after site closure.
15. Assurance of closure and post-closure financing shall be provided as follows:
 - A. Closure: Prior to the beginning of the Permittee's fiscal year during which site closure begins, the Permittee shall document for the Commissioner that the Permittee's Bridgeport Project budget for that fiscal year will include dedicated and approved funds adequate to cover all of that year's estimated costs to close the site in accordance with Sections 22a-209-1 through -14 RCSA and the provisions of this permit ("Closure Activities"). If closure of the site is to extend beyond one fiscal year, prior to the start of each fiscal year, the Permittee shall document for the Commissioner that funds adequate to implement that year's scheduled Closure Activities have been dedicated and approved in that year's budget. The Permittee shall continue to dedicate and expend funds in this manner until the Closure Activities are fully executed.
 - B. Post-Closure: No later than sixty (60) days before the Permittee begins to accept waste at the facility pursuant to this permit, the Permittee shall post a bond or establish other financial assurance ("Surety") in conformity with any of the financial mechanisms identified in 40 CFR 264.145. Except as specified herein, and with the modifications specified in Section 22a-209-4(i)(1)(A), (C) and (D) RCSA, the provisions of 40 CFR 264.141, 40 CFR 264.144, 40 CFR 264.145 and 40 CFR 264.151, as they exist on the date of issuance of this permit, shall govern the establishment, maintenance and release of such Surety. The term "post-closure plan" in the federal regulations shall mean the plan submitted by the Permittee pursuant to Section 22a-209-14(e)(6) RCSA. Such Surety shall be established in an amount no less than the detailed cost to be estimated and documented by the Permittee, and approved by the Commissioner, to cover the cost of post-closure maintenance and monitoring of the facility for a period of at least five years in accordance with the plan submitted by the Permittee pursuant to Section 22a-209-14(e)(6). The Permittee shall maintain such Surety for no less than thirty (30) years. The amount

of the Surety shall be adjusted by the Permittee no later than sixty (60) days prior to each anniversary date of the establishment of such Surety in order to reflect inflation and any other change in the cost of post-closure care for the facility, as approved by the Commissioner, for the five years following the adjustment (or for such lesser period of time as may remain in the period of required post-closure care). The Permittee shall not decrease the amount of the Surety without the prior written approval of the Commissioner.

- C. Failure to comply with conditions A and B above shall constitute a violation of this permit, and shall be subject to enforcement action including but not limited to the penalty provisions of Section 22a-226(a) CGS.

FUTURE PUBLIC USE AND RECREATION PLAN

16. The Permittee shall prepare and execute a Future Public Use and Recreation Plan (the "Plan") as follows:

- A. Preparation of Plan: On or before 365 days after issuance of this permit, the Permittee shall submit a final Plan to the City of Shelton ("City") and the Citizen's Advisory Committee ("CAC") for review, and to the Commissioner for his review and written approval. In drafting the final Plan, the Permittee shall consider all comments received from the City and the CAC on any draft Plan(s), and shall incorporate any changes which are required in writing by the Department in its review of the draft Plan(s). The final plan shall be generally consistent with the draft future use plan dated July 31, 1990 and included as Sheets 1 - 6, inclusive, (paragraph 1.H above) of the application materials, and shall include similar elements noted on that plan in addition to permanent public restrooms.

The final Plan shall include a plan for future use of the Permittee's Shelton landfill site ("the site") by the public and for post-closure care and maintenance of the site, an implementation schedule, and an estimate of the total cost of implementing the plan.

- B. Execution of Plan: The Plan, as approved by the Commissioner, shall be constructed and maintained by the Permittee as part of the post-closure care of the site in accordance with the approved schedule.

Prior to the beginning of the Permittee's fiscal year during which site closure begins, the Permittee shall document for the Commissioner that the Permittee's Bridgeport Project budget for that fiscal year will include dedicated and approved funds adequate to cover all of that year's estimated costs to execute the approved Plan in accordance with the approved schedule. If execution of the approved plan in accordance with the approved schedule is to extend beyond one fiscal year, prior to the start of each fiscal year the Permittee shall document for the Commissioner that funds adequate to execute that year's scheduled Plan activities have been dedicated and approved in

that year's budget. The Permittee shall continue to dedicate and expend funds in this manner until the approved Plan is fully executed and implemented in accordance with the approved schedule.

- C. Conditions A and B above shall supersede Conditions 3 and 4 of the Solid Waste Permit to Construct number SW126-1VA issued January 11, 1990 as amended.
- D. Failure to comply with conditions A and B above shall constitute a violation of this permit, and shall be subject to enforcement action including but not limited to the penalty provisions of Section 22a-226(a) CGS.

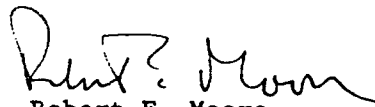
OTHER TERMS & CONDITIONS

- 17. Any document required to be submitted to the Commissioner under this permit shall, unless otherwise specified in writing by the Commissioner, be directed to: Director, Waste Engineering & Enforcement Division, Waste Management Bureau, Department of Environmental Protection, 165 Capitol Avenue, Hartford, CT, 06106.
- 18. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this permit shall be signed by a duly authorized representative of the Permittee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."
- 19. The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this permit means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.
- 20. The permittee shall use best efforts to submit to the Commissioner all documents required by this permit in a complete and approvable form. The Commissioner may approve any document required by this permit with conditions or modifications. If the Commissioner indicates that any document or other action is deficient and does not approve it with conditions or modifications, it is deemed disapproved, and the permittee shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within

thirty days of the Commissioner's notice of deficiencies. Nothing in this paragraph shall excuse noncompliance or delay.

21. The permittee shall cause the facility to be operated in conformity with all applicable law. All persons under the supervision of the permittee shall be given sufficient training to identify waste received at the facility which is not suitable for processing and take proper action in handling such waste.
22. This permit is subject to and in no way derogates any present or future property rights or powers of the State of Connecticut and conveys no property rights in real estate or material nor any exclusive privileges and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.
23. This permit may be revoked, suspended, modified or transferred in accordance with applicable law.
24. Nothing in this permit shall affect the Commissioner's authority to institute any proceeding to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and impose penalties for violations of law.

Dated in Hartford, Connecticut this 5th day of August 1992.


Robert E. Moore
Deputy Commissioner

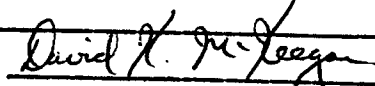

Permit No. 1260181

Permit Application 90029

CERTIFIED TO BE A TRUE COPY
CONNECTICUT DEPARTMENT OF
ENVIRONMENTAL PROTECTION

NAME:

TITLE:



**STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
MINOR PERMIT AMENDMENT**



**TO
PERMIT TO CONSTRUCT NO. 1260181**

**PERMITTEE: Connecticut Resources Recovery Authority (CRRA)
FACILITY LOCATION: 866 River Road, Shelton
MUNICIPALITY: Shelton
PERMIT NO.: 1260181**

Pursuant to Connecticut General Statutes (CGS) Section 22a-208a and Regulations of Connecticut State Agencies (RCSA) Section 22a-209-4, Permit to Construct No. 1260181 issued on August 5, 1992 by the Commissioner of Environmental Protection ("Commissioner") to the Connecticut Resources Recovery Authority ("Permittee") for the horizontal expansion of the Shelton Landfill, IS HEREBY AMENDED.

Specifically, the Permittee is allowed to use financial assurance test requirements in accordance with RCRA Subtitle D 40 CFR 258.74(f) "Local Government Financial Test" as a means for demonstrating meeting financial surety requirements under Subtitle D. Paragraph 15.B of permit to construct no. 1260181 is hereby deleted and replaced with the following language:

- B. Post-Closure: Within thirty (30) days of issuance of this minor permit amendment, the Permittee shall post a bond or establish other financial assurance ("financial assurance mechanism") in conformity with any of the financial mechanisms identified in 40 CFR 264.145 or 40 CFR 258.74(f). Except as specified herein, and with the modifications specified in RCSA Section 22a-209-4(i)(1)(A), (C), and (D), the provisions of 40 CFR 264.141, 40 CFR 264.144, 40 CFR 264.145, 40 CFR 264.151 and 40 CFR 258.74(f), as they exist on the date of issuance of this minor permit amendment, shall govern the establishment, wording, maintenance and release of such financial assurance mechanism. The term "post-closure plan" in the federal regulations shall mean the plan submitted by the Permittee pursuant to RCSA Section 22a-209-14(e)(6). Such financial assurance mechanism shall be established in an amount no less than the detailed cost to be estimated and documented by the Permittee, and approved by the Commissioner, to cover the cost of post-closure maintenance and monitoring of the facility for a period of at least five years in accordance with the plan submitted by the Permittee pursuant to RCSA Section 22a-209-14(e)(6). The Permittee shall maintain such financial assurance mechanism for no less than thirty (30) years. The amount of the financial assurance mechanism shall be adjusted by the Permittee no later than sixty (60) days prior to each anniversary date of the establishment of such financial assurance mechanism in order to reflect inflation and any other change in the cost of post-closure care for the facility, as approved by the Commissioner, for the five years following the adjustment (or for such lesser period of time as may remain in the period of required post-closure care). The Permittee shall not decrease the amount of the financial assurance mechanism without the prior written approval of the Commissioner.

The issuance of this minor permit amendment is based on the following:

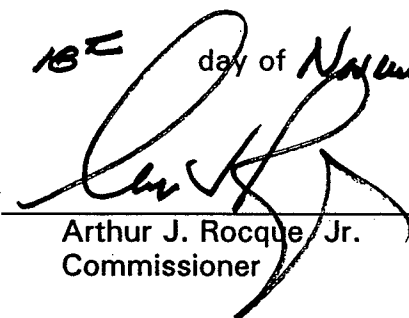
1. Application for a minor permit amendment prepared by the Connecticut Resources Recovery Authority dated July 15, 1998 and received by the Bureau of Waste Management Waste Engineering and Enforcement Division on July 15, 1998.
2. This permit is subject to and in no way derogates any present or future property rights or powers of the State of Connecticut and conveys no property rights in real estate or material nor any exclusive privileges and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.
3. This permit may be revoked, suspended, renewed, modified or transferred in accordance with applicable law.
4. Nothing in this permit shall affect the Commissioner's authority to institute any proceeding to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law.

All other terms and conditions contained in the Permit to Construct No. 1260181 and the Permit to Operate No. 1260227, issued August 5, 1992 and April 19, 1994 respectively, remain unchanged.

Issued in Hartford, Connecticut on this

18th day of November, 1998.

By


Arthur J. Rocque Jr.
Commissioner

Minor Amendment to Permit to Construct No. 1260181-MA/PC

Application No. 199803178

Permittee - Certified Mail # Z 088 901 689

Certified to be a true copy of a document in the files of the Department of Environmental Protection, Waste Management Bureau.

Name: Diana Sealok
Title: Office Assistant
Date: November 23, 1998



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PERMIT TO OPERATE

Pursuant to Section 22a-208a of the Connecticut General Statutes (CGS) and Section 22a-209-4 of the Regulations of Connecticut State Agencies (RCSA) the Commissioner of Environmental Protection (Commissioner) hereby issues this permit to the Connecticut Resources Recovery Authority (CRRA) as Permittee to operate a horizontal expansion of its solid waste disposal area at the Shelton landfill, 866 River Road, Shelton, CT (the "facility").

The facility shall be constructed and operated in accordance with the Solid Waste Permit to Construct No. 1260181 issued to the CRRA on August 5, 1992 and in accordance with the following:

1. "Project Manual Contract Documents For Connecticut Resources Recovery Authority Shelton Landfill Horizontal Expansion Southeast Area" prepared by Fuss & O'Neill Inc. Consulting Engineers dated January 4, 1993.
2. Engineering Plans entitled "Construction Plans For Shelton Landfill Horizontal Expansion Southeast Area (Sheets 1 of 28 through 28 of 28)" prepared by Fuss & O'Neill Inc. Consulting Engineers dated June 12, 1992, revised to December 30, 1992.
3. "Certification Report for the Construction of the Shelton Landfill Horizontal Expansion Southeast Area" prepared for the CRRA by the Wehran Engineering Corporation dated January 1994, revised to February 1, 1994.
4. "Project Manual Contract Documents for Landfill Operation and Management, Connecticut Resources Recovery Authority, Shelton Landfill Horizontal Expansion Southeast Area" prepared by Fuss & O'Neill Inc. Consulting Engineers dated January 4, 1993, revised to March 23, 1994.
5. Engineering Plans entitled "Operation and Management Plans for Shelton Landfill Horizontal Expansion Southeast Area (Sheets 1 of 13 through 13 of 13)" prepared by Fuss & O'Neill Inc. Consulting Engineers dated January 1993, sheets 3 of 13 through 6 of 13 (inclusive) revised to March 21, 1994.
6. Letter and attachments, from Christopher Recchia, Director of Environmental Programs, CRRA dated January 31, 1994; concerning surety for post-closure maintenance and monitoring of the ash residue landfill.


(Printed on Recycled Paper)

7. Within one hundred and twenty (120) days of issuance of this permit, the permittee shall submit written notification to the Commissioner that the demonstrations for location restrictions, pursuant to 40 CFR Part 258 Subpart B, have been included in the facility operating record.

The permittee shall operate this ash residue landfill in accordance with applicable Departmental permits, state statutes, regulations and guidelines, and all applicable documents referenced in the permits to construct and operate.

This permit to operate may be revoked, suspended, modified or transferred in accordance with the reasons and procedures set forth in Section 22a-209-4(g) and (h) of the Regulations of Connecticut State Agencies.

Dated in Hartford, Connecticut this th 19 day of April 1994.



Robert E. Moore
Deputy Commissioner

Solid Waste Permit to Operate No. 1260227

Permit Application No. 90029

Permittee -Certified Mail # P-047-177-263

Town Clerk -Certified Mail # P-047-177-258

CERTIFIED TO BE A TRUE COPY
CONNECTICUT DEPARTMENT OF
ENVIRONMENTAL PROTECTION

NAME: Elaine DeSalvo
TITLE: Office Assistant



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



December 19, 1996

Mr. David J. Phillips, P.E.
Senior Environmental Engineer
Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, CT 06103

Re: CRRA Shelton Landfill - N.E. Ash Area Expansion

Dear Mr. Phillips:

The Bureau of Waste Management's Waste Engineering and Enforcement Division (WEED) has received your letter dated October 31, 1996 transmitting a copy of the October 1996 report prepared by Golder Construction Services, Inc. entitled "Final Record Documentation Report Northeast Ash Area Expansion Shelton Landfill Shelton, Connecticut." Golder Construction Services, Inc. was retained by the Connecticut Resources Recovery Authority to provide full-time, independent construction quality assurance (CQA) monitoring during construction of the Northeast Ash Area Expansion. The referenced report documents activity associated with the construction of cells 1, 2, and 3 and certifies that this disposal area was constructed in substantial conformance with the approved construction drawings, technical specifications, approved modifications and the requirements of Section 22a-209-14 of the Regulations of Connecticut State Agencies (RCSA).

The Department had conditionally approved the use of cells 1, 2, and 3, for the disposal of ash in letters dated August 16, 1996, July 18, 1996, and June 27, 1996, respectively after receiving construction certification from Golder Associates, Inc. This latest submittal further confirms that the Northeast Ash Area Expansion is consistent with the landfill construction requirements outlined in the permit to construct (Solid Waste Permit No. 1260181) issued on August 5, 1992.

Please contact David McKeegan (WEED) at 424-3313 if you have any questions regarding this letter.

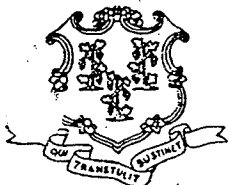
Sincerely,

David A. Nash
Director
Waste Engineering and Enforcement Division
Bureau of Waste Management

DAN/dm

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STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



August 16, 1996

Mr. David J. Phillips, P.E.
Senior Environmental Engineer
Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, CT 06103

Re: CRRA Shelton Landfill - Cell 1, Northeast Ash Area Expansion

Dear Mr. Phillips:

The Bureau of Waste Management's Waste Engineering and Enforcement Division (WEED) has received your letter dated July 26, 1996 regarding the completion of cell 1 of the Northeast Ash Expansion Area at the Shelton Landfill. Attached to your letter was a certification letter (dated July 25, 1996) prepared by Golder Associates, Inc. confirming that the elevations and base grades of cell 1 are consistent with the landfill construction requirements outlined in the permit to construct (Solid Waste Permit No. 1260181) issued on August 5, 1992. The certification letter also included information on the maximum high water table which demonstrates that the separation distance between the liner grades and measured high water table exceeds five feet. The Connecticut Resources Recovery Authority (CRRA) is required to submit this information to the Commissioner prior to commencing any residue disposal operations in the expansion areas in accordance with condition No. 7 of the permit to construct.

Based on the information provided by the CRRA and Golder Associates, Inc. the Bureau of Waste Management hereby approves of the disposal of ash residue in cell 1 of the Northeast Ash Area Expansion at the Shelton Landfill subject to the following conditions:

1. The permittee shall operate this ash residue landfill in accordance with applicable Departmental permits, state statutes, regulations and guidelines, and all applicable documents referenced in the permits to construct and operate and
2. the permittee shall not dispose of ash residue in cell 1 of the Northeast Ash Area Expansion prior to the issuance of a groundwater discharge permit by the Bureau of Water Management pursuant to Section 22a-430 of the Connecticut General Statutes (CGS).

Please contact David McKeegan (WEED) at 424-3313 if you have any questions regarding this letter.

Sincerely,

Richard J. Barlow

Chief

Bureau of Waste Management

RJB/dm

cc: O. Inglese, DEP, BWM

(Printed on Recycled Paper)

79 Elm Street • Hartford, CT 06106 - 5127

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STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



July 18, 1996

Mr. David J. Phillips, P.E.
Senior Environmental Engineer
Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, CT 06103

Re: CRRA Shelton Landfill - Cell 2, Northeast Ash Area Expansion

Dear Mr. Phillips:

The Bureau of Waste Management's Waste Engineering and Enforcement Division (WEED) has received your letter dated July 1, 1996 regarding the completion of cell 2 of the Northeast Ash Expansion Area at the Shelton Landfill. Attached to your letter was a certification letter (dated June 28, 1996) prepared by Golder Associates, Inc. confirming that the elevations and base grades of cell 2 are consistent with the landfill construction requirements outlined in the permit to construct (Solid Waste Permit No. 1260181) issued on August 5, 1992. The certification letter also included information on the maximum high water table which demonstrates that the separation distance between the liner grades and measured high water table exceeds five feet. The Connecticut Resources Recovery Authority (CRRA) is required to submit this information to the Commissioner prior to commencing any residue disposal operations in the expansion areas in accordance with condition No. 7 of the permit to construct.

Based on the information provided by the CRRA and Golder Associates, Inc. the Bureau of Waste Management hereby approves of the disposal of ash residue in cell 2 of the Northeast Ash Area Expansion at the Shelton Landfill subject to the following conditions:

1. The permittee shall operate this ash residue landfill in accordance with applicable Departmental permits, state statutes, regulations and guidelines, and all applicable documents referenced in the permits to construct and operate and
2. the permittee shall not dispose of ash residue in cell 2 of the Northeast Ash Area Expansion prior to the issuance of a groundwater discharge permit by the Bureau of Water Management pursuant to Section 22a-430 of the Connecticut General Statutes (CGS).

Please contact David McKeegan (WEED) at 424-3313 if you have any questions regarding this letter.

Sincerely,
Richard J. Barlow
Richard J. Barlow
Chief
Bureau of Waste Management

RJB/dm
cc: O. Inglese, DEP, BWM

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



June 27, 1996

Mr. David J. Phillips, P.E.
Senior Environmental Engineer
Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, CT 06103

Re: CRRA Shelton Landfill - Cell 3, Northeast Ash Area Expansion,

Dear Mr. Phillips:

The Bureau of Waste Management's Waste Engineering and Enforcement Division (WEED) has received your letter dated June 11, 1996 regarding the completion of cell 3 of the Northeast Ash Expansion Area at the Shelton Landfill. Attached to your letter was a certification letter (dated June 11, 1996) prepared by Golder Associates, Inc. confirming that the elevations and base grades of cell 3 are consistent with the landfill construction requirements outlined in the permit to construct (Solid Waste Permit No. 1260181) issued on August 5, 1992. The certification letter also included information on the maximum high water table which demonstrates that the separation distance between the liner grades and measured high water table exceeds five feet. The Connecticut Resources Recovery Authority (CRRA) is required to submit this information to the Commissioner prior to commencing any residue disposal operations in the expansion areas in accordance with condition No. 7 of the permit to construct.

Based on the information provided by the CRRA and Golder Associates, Inc. the Bureau of Waste Management hereby approves of the disposal of ash residue in cell 3 of the Northeast Ash Area Expansion at the Shelton Landfill subject to the following conditions:

1. The permittee shall operate this ash residue landfill in accordance with applicable Departmental permits, state statutes, regulations and guidelines, and all applicable documents referenced in the permits to construct and operate and
2. the permittee shall not dispose of ash residue in cell 3 of the Northeast Ash Area Expansion prior to the issuance of a groundwater discharge permit by the Bureau of Water Management pursuant to Section 22a-430 of the Connecticut General Statutes (CGS).

Please contact David McKeegan (WEED) at 424-3313 if you have any questions regarding this letter.

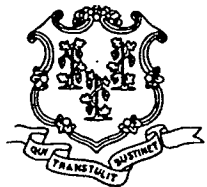
Sincerely,

Handwritten signature of Richard J. Barlow in cursive.

Richard J. Barlow
Chief
Bureau of Waste Management

RJB/dm
cc: O. Inglese, DEP, BWM

RECEIVED
JUN 29 1996
65 JUN -2 11 10 10



STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



MODIFICATION OF PERMIT TO CONSTRUCT NO. 1260181 AND PERMIT TO OPERATE NO. 1260227

Pursuant to Connecticut General Statutes ("CGS") Section 22a-208a(d) and Regulations of Connecticut State Agencies ("RCSA") Section 22a-209-4(b), Permit to Construct No. 1260181 and Permit to Operate No. 1260227 issued on August 5, 1992 and April 19, 1994, respectively by the Department of Environmental Protection ("Department") to the Connecticut Resources Recovery Authority (CRRA) ("Permittee"), to construct and operate a horizontal expansion of its solid waste disposal area at the Shelton Landfill, 866 River Road, Shelton, CT (the "facility") for the disposal of residue from the Bridgeport Resources Recovery Project, ARE HEREBY MODIFIED.

Specifically, the Permittee is allowed to revise the final closure configuration of the Southeast and Northeast ash expansion areas which includes the steepening of sideslope grades from a 3H:1V (3 horizontal to 1 vertical) to a 2H:1V (2 horizontal to 1 vertical) configuration, the incorporation of sideslope bench terraces and the installation of additional drainage devices to improve stormwater runoff control. The Permittee shall assure compliance with all terms and conditions of this permit modification.

Landfill closure construction activities shall be conducted in accordance with the following:

1. Condition 2.C of Permit to Construct No. 1260181 is deleted and the following is substituted in its place: The final slope for the Southeast and Northeast ash expansion areas shall not exceed a maximum slope of 2H:1V (2 horizontal to 1 vertical) with the inclusion of sideslope terraces and additional drainage devices as shown on the plans and application materials identified in condition 2, below.
2. (A) Submittal entitled "Application For Permit Modification, Shelton Landfill, 866 River Road (Route 110), Shelton, CT - Southeast and Northeast Ash Area Horizontal Expansion Final Closure/Capping With Slope Modification" prepared by the Connecticut Resources Recovery Authority, dated November 1996 and received by the Bureau of Waste Management on November 13, 1996.
- (B) Report entitled "Application For Permit Modification, Final Closure/Capping (2 Horizontal :1 Vertical Exterior Slopes) for the CRRA Shelton Landfill Ash Area Horizontal Expansion 866 River Road Shelton, CT Volume I Southeast Ash Area" prepared by Golder Associates Inc., dated September 1996 and received by the Bureau of Waste Management on November 13, 1996.
- (C) Report entitled "Application For Permit Modification, Final Closure/Capping (2 Horizontal :1 Vertical Exterior Slopes) for the CRRA Shelton Landfill Ash Area Horizontal Expansion 866 River Road Shelton, CT Volume II Northeast Ash Area" prepared by Golder Associates Inc., dated September 1996 and received by the Bureau of Waste Management on November 13, 1996.

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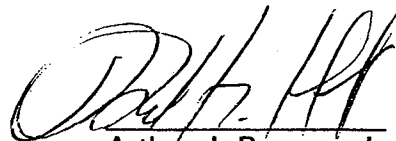
Shelton Landfill - Ash Expansion Areas
Permit Modification
Construction and Operation
page 2

- (D) Letter and attachments from David J. Phillips, P.E., CRRA to David K. McKeegan, Bureau of Waste Management dated March 24, 1998, which includes text revisions to the submittal and reports identified above.
 - (E) Engineering drawings entitled "Operations and Maintenance Drawings Southeast Ash Area Expansion, Revised Final (Figures 1 through 9, inclusive)", prepared by Golder Associates Inc. dated January 1993, revised to March 1998 and received by the DEP on March 31, 1998.
 - (F) Engineering drawings entitled "Operations and Maintenance Drawings Northeast Ash Area Expansion, Revised Final (Figures 1 through 12, inclusive)", prepared by Golder Associates Inc. dated July 1996, revised to March 1998 and received by the DEP on March 31, 1998.
3. On or before September 30, 1999, the Permittee shall complete all final closure and capping activities at the Southeast and Northeast ash expansion areas, including but not limited to subbase preparation; installation of the geosynthetic cap; placement of final cover soils and seeding; and installation of drainage improvements, in accordance with the plans outlined in condition 2, above.
 4. The Permittee shall provide, within ninety (90) days of completion of the landfill closure, as-built site plans in accordance with RCSA Section 22a-209-13(f). The as-built plan shall include certification by a professional engineer registered in the State of Connecticut that the grading and closure have been completed in accordance with paragraph one above. The as-built plan shall also include the final report of the Quality Assurance Consultant (QAC), which shall include documentation that the final capping system was designed and installed in accordance with approved plans and specifications. A detailed description of the solid waste disposal area shall also be filed in the Town of Shelton municipal land records in accordance with RCSA Section 22a-209-13(g), including notice that use of the site following closure requires approval of the Commissioner in accordance with RCSA Section 22a-209-13(d) and a copy of this description shall also be forwarded to the Commissioner.
 5. Any document required to be submitted to the Commissioner under this permit modification shall, unless otherwise specified in writing by the Commissioner, be directed to: Director, Waste Engineering & Enforcement Division, Bureau of Waste Management, Department of Environmental Protection, 79 Elm Street, Hartford, CT, 06106-5127.
 6. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this permit modification, shall be signed by a duly authorized representative of the Permittee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the

information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."

7. This permit modification is subject to and in no way derogates any present or future property rights or powers of the State of Connecticut and conveys no property rights in real estate or material nor any exclusive privileges and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.
8. This permit modification may be revoked, suspended, renewed, modified or transferred in accordance with applicable law.
9. Nothing in this permit modification shall affect the Commissioner's authority to institute any proceeding to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law.
10. To the extent any term or condition of this permit modification is inconsistent with a term or condition of Permit to Construct No. 1260181 or Permit to Operate No. 1260227, the term or condition in this permit modification shall control. All other conditions and terms in Permit to Construct No. 1260181 and Permit to Operate No. 1260227 shall remain in effect.

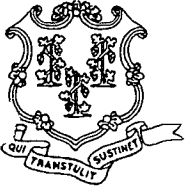
Issued in Hartford, Connecticut on this 25th day of August 1998.


Arthur J. Rocque, Jr.
Commissioner

Modification of Solid Waste Permit to Construct No. 1260181
Modification of Solid Waste Permit to Operate No. 1260227
Modification No. 1260399
Application No. 199602484
Permittee - Certified Mail # P058097341
City/Town Clerk - Certified Mail # P058097340

**Certified to be a true copy of a document in the files
of the Department of Environmental Protection, Waste
Management Bureau.**

Name: Quiana Sedof
Title: Office Assistant
Date: August 28, 1998



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



April 27, 2001 01 APR 30 AM 10:48

RECEIVED
CONN. RESOURCES
RECOVERY AUTHORITY

Mr. Michael Tracey
Engineering Services Director
Connecticut Resources Recovery Authority
100 Constitution Plaza, 17th Floor
Hartford, CT 06103-1722

Re: Shelton Landfill – Northeast and Southeast Ash Area Expansions
Approval of as-built plans

Dear Mr. Tracey:

By this letter, the Department of Environmental Protection's (DEP) Bureau of Waste Management approves the completed closure of the Northeast and Southeast Ash Area Expansions located at the Shelton Landfill, 866 River Road (Route 110), Shelton, Connecticut. As detailed in the closure certification reports and on the as-built engineering plans prepared by Golder Associates Inc. (received by the DEP on April 26, 2000 (Northeast Area), August 15, 2000 (Southeast Area) and on January 9, 2001, respectively) and the detailed landfill description (received by the DEP on March 27, 2001), the Connecticut Resources Recovery Authority (CRRA) has completed the closure of the ash expansion areas in accordance with approved plans and has made the necessary filing on the City of Shelton's land records in accordance with Regulations of Connecticut State Agencies (RCSA) Section 22a-209-13.

The CRRA should continue to inspect the landfill on a regular basis and correct any problems (i.e., erosion of side slopes, maintenance of drainage swales, etc.) that may occur at the landfill. These inspections should be an integral part of the landfill's thirty (30) year post-closure maintenance and monitoring programs implemented by the property owner, in accordance with RCSA Section 22a-209-13(h).

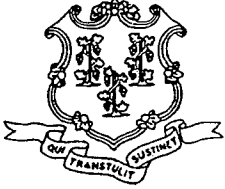
Additionally, upon successful completion of the preparation and execution of the "Final Public Use and Recreation Plan", required pursuant to paragraph 16 of Solid Waste Permit to Construct No. 1260181, the CRRA shall submit for review and approval an amended as-built engineering plan(s) depicting the final conditions at this facility.

If you have any questions regarding this letter, please contact David McKeegan of the Waste Engineering and Enforcement Division at (860) 424-3313.

Sincerely,

David A. Nash
Director
Waste Engineering & Enforcement Division
Bureau of Waste Management

DAN:DM:dm
cc: Peter Egan, CRRA



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



April 30 2001 AM 10:44

RECEIVED
CONN. RESOURCES
RECOVERY AUTHORITY

Mr. Michael Tracey
Engineering Services Director
Connecticut Resources Recovery Authority
100 Constitution Plaza, 17th Floor
Hartford, CT 06103-1722

Re: Shelton Landfill – Northeast and Southeast Ash Area Expansions
Approval of as-built plans

Dear Mr. Tracey:

By this letter, the Department of Environmental Protection's (DEP) Bureau of Waste Management approves the completed closure of the Northeast and Southeast Ash Area Expansions located at the Shelton Landfill, 866 River Road (Route 110), Shelton, Connecticut. As detailed in the closure certification reports and on the as-built engineering plans prepared by Golder Associates Inc. (received by the DEP on April 26, 2000 (Northeast Area), August 15, 2000 (Southeast Area) and on January 9, 2001, respectively) and the detailed landfill description (received by the DEP on March 27, 2001), the Connecticut Resources Recovery Authority (CRRA) has completed the closure of the ash expansion areas in accordance with approved plans and has made the necessary filing on the City of Shelton's land records in accordance with Regulations of Connecticut State Agencies (RCSA) Section 22a-209-13.

The CRRA should continue to inspect the landfill on a regular basis and correct any problems (i.e., erosion of side slopes, maintenance of drainage swales, etc.) that may occur at the landfill. These inspections should be an integral part of the landfill's thirty (30) year post-closure maintenance and monitoring programs implemented by the property owner, in accordance with RCSA Section 22a-209-13(h).

Additionally, upon successful completion of the preparation and execution of the "Final Public Use and Recreation Plan", required pursuant to paragraph 16 of Solid Waste Permit to Construct No. 1260181, the CRRA shall submit for review and approval an amended as-built engineering plan(s) depicting the final conditions at this facility.

If you have any questions regarding this letter, please contact David McKeegan of the Waste Engineering and Enforcement Division at (860) 424-3313.

Sincerely,

David A. Nash
Director
Waste Engineering & Enforcement Division
Bureau of Waste Management

DAN:DM:dm
cc: Peter Egan, CRRA

(Printed on Recycled Paper)

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FAX (860) 727-4141

March 23, 2001

VIA USPS FIRST CLASS MAIL

Mr. David Nash, Director
Connecticut Department of Environmental Protection
Waste Management Bureau
Waste Engineering and Enforcement Division
79 Elm Street
Hartford, CT 06103

RE: Closure Of The Entire Shelton Landfill Including The Southeast Ash Area and the
Northeast Ash Area

Dear Mr. Nash:

I have attached hereto the information required for the above-referenced matter by Connecticut Agency Regulations Section 22a-209-13(g). In addition, enclosed please find a complete set of as-built drawings as required pursuant to Connecticut Agency Regulations Section 22a-209-13(f).

If you have any questions on the attached information, please call me.

Very truly yours,



Ann Stravalle-Schmidt
Director of Legal Services

cc: Mr. David McKeegan, ConnDEP [w/o maps]
Mr. Michael Tracey, CRRA [w/o maps]
Mr. Peter Egan, CRRA [w/o maps]
Mark Sussman, Esquire [w/o maps]

**CLOSURE DOCUMENTATION AND INFORMATION REQUIRED BY
CONN. AGENCIES REGS. SECTION 22A-209-13(g) FOR THE ENTIRE
SHELTON LANDFILL INCLUDING THE SOUTHEAST ASH AREA
AND THE NORTHEAST ASH AREA**

1. On March 18, 1999, a Notice of Closure of the Shelton Landfill exclusive of the Southeast Ash Area and Northeast Ash Area (the "Disposal Area"), was recorded in the City of Shelton Land Records at Book 1590, Page 274. The instant closure documentation pertains to the closure of the Southeast Ash Area and Northeast Ash Area which results in the closure of the entire Landfill. A certified copy of the closure notice for the entire Shelton Landfill including the Southeast Ash Area and Northeast Ash Area (the "Landfill"), which was recorded in the City of Shelton Land Records on February 22, 2001, at Book 1754, Page 226, is attached hereto.
2. The volume and page numbers for the deed to the property on which the Landfill is located are: Volume 1580, Page 213.
3. The general types of wastes within the Landfill are municipal solid waste and incinerator ash residue. See attached copy of map entitled, "CONNECTICUT RESOURCES RECOVERY AUTHORITY SHELTON LANDFILL SHELTON, CONNECTICUT EXISTING CONDITIONS (SHEET 1 OF 4) VERONICA E. FOSTER, P.E. CT. P.E. LICENSE # 20228 Date 3-16-2001 GOLDBER ASSOCIATES PHILADELPHIA USA PROJECT NO. 993-6515 FILE NO.: CT01-293 SCALE: AS SHOWN," which map is was filed in the Shelton City Clerk's Office on March 1, 2001 [Shelton City Clerk Map Nos. 3725, 3725a, 3726, and 3726a].
4. The depth of fill for the Southeast Ash Area is estimated to be fifty (50) feet maximum. The depth of fill for the Northeast Ash Area is estimated to be eighty (80) feet maximum.
5. The Southeast Ash Area and Northeast Ash Area were covered from the bottom up as follows: (i) six inches of native soil; (ii) forty mil geomembrane (hdpe); (iii) a geocomposite drainage layer; (iv) eighteen inches of coversoil; (v) six inches of a vegetative layer; and (vi) a permanent turf reinforcement matt. The foregoing cover was in accordance with the Connecticut Department of Environmental Protection (the "CTDEP") regulations and was submitted for approval with the CTDEP in a closure plan dated August 14, 2000.
6. The Landfill was in use from 1969 to February, 1998.
7. The area of potential impacted groundwater is located generally as identified by the Fuss & O'Neill, Inc. 1988 "Shelton Landfill Groundwater Assessment" and the Environmental Risk LTD (ERL), October 1995, "Hydrogeological Investigation in the Northeast Expansion Area of the Shelton Landfill and Two Contiguous Properties To The North," which are both on file in the offices of CRRA and the CTDEP. The plume emanates from the Shelton Landfill in a generally southeasterly direction toward the Housatonic River and lagoon and the Farmill River and is contained within the Shelton Landfill property and properties owned by CRRA.

**NOTICE OF CLOSURE
IN ACCORDANCE WITH SECTION 22a-209-13(g)
OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES**

Pursuant to Section 22a-209-13 (g) of the Regulations of Connecticut State Agencies notice is hereby given by the **CONNECTICUT RESOURCES RECOVERY AUTHORITY**, a body politic and corporate constituting a public instrumentality and political subdivision of the State of Connecticut, as operator and owner of a certain sanitary landfill known as the Shelton Landfill and located in Shelton, Connecticut (the "Landfill"), that the entire Landfill, including the Southeast Ash Area and the Northeast Ash Area, has been voluntarily closed in accordance with all regulatory requirements of the State of Connecticut's Department of Environmental Protection.

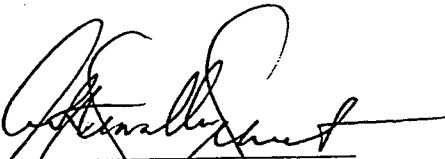
The Landfill is located on a certain piece or parcel of land owned by Connecticut Resources Recovery Authority and more particularly described in Exhibit A attached hereto and made a part hereof.


The Landfill is more particularly described on a certain map or survey entitled, "CONNECTICUT RESOURCES RECOVERY AUTHORITY SHELTON LANDFILL SHELTON, CONNECTICUT EXISTING CONDITIONS (SHEET 1 OF 2) VERONICA E. FOSTER, P.E. CT. P.E. LICENSE # 20228 Date 11-15-2000 GOLDR ASSOCIATES PHILADELPHIA USA PROJECT NO. 993-6515 FILE NO.: CT01-291 SCALE: AS SHOWN," which map is on file in the Shelton City Clerk's Office.

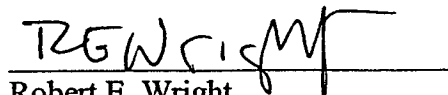
In Witness Whereof, the CONNECTICUT RESOURCES RECOVERY AUTHORITY has hereunto set its hand and seal as of this 20th day of February, 2001.

Witnesses:

CONNECTICUT RESOURCES
RECOVERY AUTHORITY


Ann Stravalle-Schmidt


Paul R. Doyle


Robert E. Wright
Its President
Duly Authorized


I HEREBY CERTIFY THAT THIS IS A TRUE COPY OF THE ORIGINAL DOCUMENT RECEIVED FOR RECORD IN THE OFFICE OF THE CITY/TOWN CLERK OF THE CITY OF SHELTON ON 2/22/2001 9:46 AM
ATTEST: 
ASST. CITY/TOWN CLERK

EXHIBIT A

A certain piece or parcel of land containing 102 acres, more or less, situated in the Town of Shelton, County of Fairfield and State of Connecticut, and bounded easterly by land now or formerly of Connecticut Resources Recovery Authority, southerly by the Housatonic River, westerly by the Far Mill River, and northerly by River Road, Route No. 110, and being shown and designated on certain maps or plans entitled "PROPERTY SURVEY PREPARED FOR CONNECTICUT RESOURCES RECOVERY AUTHORITY OF SHELTON LANDFILL ROUTE 110 SHELTON, CONNECTICUT JOB NUMBER 95121B9 PHASE 8000 DATE 9/11/97 SHEET NO[S]. 1 AND 2 SCALE: 1" = 100' FUSS & O'NEILL INC. CONSULTING ENGINEERS 146 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040 (860) 646-2469," which maps or plans are on file in the Shelton City Clerk's Office. Said piece or parcel of land being more particularly bounded and described as follows:

Commencing at a point on the northerly corner of the premises herein described, said point of commencement being further marked by an iron rod set in the southerly highway line of River Road, Route No. 110; thence running $S75^{\circ}57'15''E$, a distance of 236.20 feet to a point; thence running $S74^{\circ}23'03''E$, a distance of 35.27 feet to a point; thence running $S73^{\circ}23'49''E$, a distance of 213.06 feet to a point; thence running $S55^{\circ}24'04''E$, a distance of 16.54 feet to a point; thence running $S68^{\circ}43'48''E$, a distance of 326.09 feet to a point; thence running $S71^{\circ}58'26''E$, a distance of 96.50 feet to a point; thence running $S77^{\circ}45'46''E$, a distance of 398.41 feet more or less to the northerly high water mark of the Housatonic River; thence running in a southwesterly direction along the high water mark of the Housatonic River, a distance of 2,739 feet more or less to a point where the northerly high water mark of the Housatonic River meets the easterly high water mark of the Far Mill River; thence running along the easterly high water mark of the Far Mill River, a distance of 5,570 feet more or less to a point on the southerly highway line of River Road, Route No. 110; thence running $N40^{\circ}29'05''E$, a distance of 4.7 feet more or less to a point; thence running $N04^{\circ}26'08''W$, a distance of 35.35 feet to a point; thence running $N40^{\circ}33'52''E$, a distance of 178.93 feet to a point; thence continuing easterly along the arc of a curve to the left having a central angle of $01^{\circ}58'59''$ and a radius of 1,959.86 feet, a distance of 67.83 feet to a point; thence continuing easterly along the arc of a curve to the left having a central angle of $06^{\circ}52'22''$ and a radius of 1,959.86 feet, a distance of 235.08 feet to a point; thence continuing easterly along the arc of a curve to the left having a central angle of $08^{\circ}39'04''$ and a radius of 1,959.86 feet, a distance of 295.92 feet to a point; thence running $N23^{\circ}02'24''E$, a distance of 435.78 feet to a point; thence running $N23^{\circ}04'37''E$, a distance of 490.45 feet to a point; thence continuing easterly along the arc of a curve to the left having a central angle of $03^{\circ}15'00''$ and a radius of 5,779.58 feet, a distance of 327.84 feet to a point; thence continuing easterly along the arc of a curve to the left having a central angle of $01^{\circ}12'29''$ and a radius of 5,779.58 feet, a distance of 121.85 feet to a point, which point is the point and place of beginning.

STATE OF CONNECTICUT)

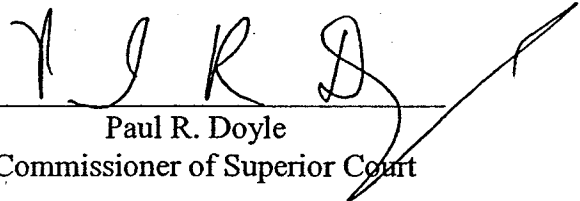
) ss:

Hartford

February 20, 2001

COUNTY OF HARTFORD)

Personally appeared Robert E. Wright, President of the Connecticut Resources Recovery Authority, signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed as such President on behalf of the Connecticut Resources Recovery Authority and the free act and deed of the Connecticut Resources Recovery Authority, before me.


Paul R. Doyle
Commissioner of Superior Court

Received for Record 2/22/2001
At 9 H. 46 H. A M. and Recorded by
Jane [Signature] Ass't Town Clerk



**STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION**



PERMIT

Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, Connecticut 06103

Attention: Mr. William R. Darcy
President

Re: Facility ID: 126-104
City of Shelton
Housatonic River Watershed

I CERTIFY THAT THIS DOCUMENT
IS A TRUE COPY OF THE ORIGINAL.
Pamela D. Burney
NAME
Processing Technician
TITLE
DEPARTMENT OF ENVIRONMENTAL
PROTECTION, BUREAU OF WATER
MANAGEMENT

This permit is issued in accordance with Section 22a-430 of Chapter 446k, Connecticut General Statutes, and regulations adopted thereunder, as amended.

Your permit application (Application No. 199502403 received on June 28, 1995), supporting documents, addenda, letters and plates identified in Appendix A attached to this permit; and supplemental documents have been reviewed by the Connecticut Department of Environmental Protection.

The Commissioner of Environmental Protection (hereinafter "the Commissioner") has found that the proposed system to treat the discharge to ground water of leachate from an existing 6.3-acre lined ash residue disposal area (the southeast expansion area), if the liner and collection system fail, and a proposed 3.1-acre lined ash residue disposal area (the northeast expansion area), if the liner and collection system fail, both located at 866 River Road, Shelton, will protect the waters of the state from pollution. The proposed system includes the construction of a new, 3.1 acre, lined municipal solid waste ash residue disposal area.

The Commissioner, acting under Section 22a-430, hereby permits the Connecticut Resources Recovery Authority (CRRA) (hereinafter "the permittee") to discharge leachate from the southeast expansion area and the proposed northeast expansion area, both located at 866 River Road, Shelton, Connecticut, to the ground waters of the state in accordance with the following conditions:

- 1) Permitted discharges:
 - (A) Discharge Serial No. 301 (southeast expansion area)
Description - Leachate from Municipal Solid Waste Ash Residue (Discharge code 305002d)

Discharge Location - Ground water in the watershed of the Housatonic River (Basin Code 6000) and the Farmill River (Basin Code 6025).

Disposal Area Design Size - 6.3 acres, lined, municipal solid waste ash residue

(B) Discharge Serial No. 302 (northeast expansion area)

Description - Leachate from Municipal Solid Waste Ash Residue (Discharge code 305002a)

Discharge Location - Ground water in the watershed of the Housatonic River (Basin Code 6000) and the Farmill River (Basin Code 6025).

Disposal Area Design Size - 3.1 acres, lined, municipal solid waste ash residue

- 2) The southeast expansion area shall be operated and maintained in accordance with the permit to construct a solid waste disposal area No. 1260181 issued on August 5, 1992, and in accordance with plans and specifications described in application No. 90-579, approved by the Commissioner on April 19, 1994. The northeast expansion area shall be operated and maintained in accordance with the permit to construct a solid waste disposal area No. 1260181 issued on August 5, 1992, and in accordance with plans and specifications described in the application, and the detailed plans and specifications identified in Appendix A.
- 3) The surface and groundwaters shall be monitored in accordance with the following submittals listed below and collectively identified as the "Groundwater and Surface Water Monitoring Program":

Groundwater and Surface Water Monitoring Program

Pages 1 to 39 from "Groundwater and Surface Water Quality Monitoring Program for the Northeast Expansion Area and Southeast Expansion Area in Support of an Amendment of the CTDEP Groundwater Discharge Permit No. LF0000052," prepared by CRRA, submitted to the Commissioner on September 18, 1995, as revised to June 12, 1996.

Tables No. 1 and 2 from submittal dated May 31, 1996 prepared by CRRA.

Table No. 3 from "Groundwater and Surface Water Quality Monitoring Program for the Northeast Expansion Area and Southeast Expansion Area in Support of an Amendment of the CTDEP Groundwater Discharge Permit No.

LF0000052," prepared by CRRA, submitted to the Commissioner on September 18, 1995, as revised to June 12, 1996.

Figures No. 1, 2, and 3 from "Groundwater and Surface Water Quality Monitoring Program for the Northeast Expansion Area, Southeast Expansion Area and MSW/Ash Area in Support of the CTDEP Groundwater Discharge Permit," submitted to the Commissioner on September 18, 1995, as revised to May 1996.

Appendices A, B, C, D, E, F, G, H, and I from submittal dated May 31, 1996 prepared by CRRA.

Appendix J from letter and attachments submitted by CRRA dated June 14, 1996 and facsimile submitted by CRRA dated June 17, 1996.

(A) Surface Water Quality Monitoring

- (i) Locations - Surface water quality monitoring shall be conducted at the following locations as shown on Figure 2, entitled "Water Quality Monitoring Site Plan," (sic) contained in the "Groundwater and Surface Water Monitoring Program" identified in paragraph 3 above.

SW-1: Farmill River upstream of the CRRA Shelton Landfill. Samples to be collected from mid-stream and mid-depth.

SW-2: Farmill River downstream of the O&G expansion area, but upstream of the confluence of the Farmill and Housatonic Rivers.

SW-2T: Samples to be collected from mid-stream and within 0.5 meter of the water surface.

SW-2B: Samples to be collected from mid-stream and within 0.5 meter of the stream bed.

SW-3: Housatonic River Lagoon inlet. Station is located to the southern side of the inlet.

SW-3T: Samples to be collected within 0.5 meter of the water surface.

SW-3M: Samples to be collected from mid-depth.

- SW-3B: Samples to be collected within 0.5 meter of the bottom of the lagoon.
- SW-4: Housatonic River Lagoon mid-point. Station is located about 200 feet east of the shoreline opposite MW-BR8 and Sediment Pool No. 2.
- SW-4T: Samples to be collected within 0.5 meter of the water surface. This location was formerly known as S-4.
- SW-4M: Samples to be collected from mid-depth. This location was formerly known as S-5, and prior to that was known as S-2.
- SW-4B: Samples to be collected within 0.5 meter of the bottom of the lagoon. This location was formerly known as S-6.
- SW-5: Housatonic River Lagoon northeast. Station is located approximately 200 feet south of MW-100 and MW-BR1.
- SW-5T: Samples to be collected within 0.5 meter of the water surface.
- SW-5M: Samples to be collected from mid-depth.
- SW-5B: Samples to be collected within 0.5 meter of the bottom of the lagoon.
- (ii) Each surface water sample collected from the stations designated in paragraph 3(A)(i) shall be sampled quarterly between the 15th and 30th day of January, April, July, and October, except as provided by paragraph 3(A)(iv)(f).
- (iii) Each surface water sample shall be analyzed for the following parameters:
- (a) Surface water samples collected from SW-1, SW-2T and SW-2B, SW-3T and SW-3B, SW-4T and SW-4B, and SW-5T and SW-5B shall be analyzed for the parameters numbered 1-32.
- (b) Surface water samples collected from SW-3M, SW-4M and SW-5M shall be analyzed for the parameters numbered 1-10.

<u>Parameter</u>	<u>Minimum Level</u>
1. Specific Conductance	
2. pH	
3. Total Dissolved Solids	
4. Total Suspended Solids	
5. Chloride	
6. Alkalinity	
7. Hardness as CaCO ₃	
8. BOD, 5-day	
9. COD	
10. Ammonia-N, total	
11. Kjeldahl-N, total	
12. Nitrate-N, total	
13. Nitrite-N, total	
14. Phosphorus, total	
15. Aluminum, total	10 µg/L
16. Arsenic, total	5 µg/L
17. Barium, total	10 µg/L
18. Cadmium, total	0.5 µg/L
19. Chromium, total	5 µg/L
20. Copper, total	5 µg/L
21. Copper, dissolved	5 µg/L
22. Iron, total	5 µg/L
23. Iron, dissolved	5 µg/L
24. Lead, total	5 µg/L
25. Lead, dissolved	5 µg/L
26. Manganese, total	1 µg/L
27. Manganese, dissolved	1 µg/L
28. Mercury, total	0.2 µg/L
29. Nickel, total	5 µg/L
30. Silver, total	1 µg/L
31. Zinc, total	10 µg/L
32. Zinc, dissolved	10 µg/L

(iv) Sampling Conditions

- (a) The Farmill River flows shall be gauged and reported for each day of sample collection.
- (b) Surface water samples shall be collected only when no measurable precipitation has fallen on the site during the previous 72 hours.

- (c) Sampling locations that are tidally influenced, (e.g. SW-2, SW-3, SW-4, and SW-5) shall be sampled at low ebb, defined here as between one-half hour and two hours after the published time of low tide for Bridgeport corrected to local mean time (NOAA Tide Tables).
- (d) Except as provided by sub-paragraph (f) of this section, all samples to be collected from the monitoring locations identified in paragraph 3(A)(i) shall be collected on the same day.
- (e) Time of collection, water clarity, sample depth, total water column depth (distance to river bottom), water and air temperature, pH, specific conductance, salinity and dissolved oxygen shall be measured in the surface water body for each sample collected in accordance with the requirements of paragraph 3(A). Results shall be reported together with the results of laboratory analyses, and for those parameters required to be measured in the field and in the laboratory, both values shall be reported.
- (f) During periods when surface water conditions would be unsafe for field personnel (e.g. icing conditions in the lagoon), DEP shall be contacted to discuss whether a particular surface water sampling event may be rescheduled.

(B) Ground Water Quality Monitoring

- (i) Locations - Ground water quality monitoring shall be conducted at the following locations as shown on Figure 2, entitled "Water Quality Monitoring Site Plan," (sic) contained in the monitoring plan contained in the "Groundwater and Surface Water Monitoring Program" identified in paragraph 3 above.

(a) Upgradient Monitoring Wells

U-1: MW-GP4
U-2: MW-BR4
U-3: MW-E
U-4: MW-ED
U-5: MW-BR6
U-6: MW-QB

(b) Compliance Monitoring Wells:

C-1: MW-RS
C-2: MW-RD
C-3: MW-BR12
C-4: MW-BR9
C-5: MW-D2D
C-6: MW-BR7

(c) Plume Characterization Wells:

W-1: MW-SD (formerly MW-Js old)
W-2: MW-SS
W-3: MW-TS
W-4: MW-TD
W-5: MW-100
W-6: MW-BR1
W-7: MW-C
W-8: MW-CD
W-9: MW-CS
W-10: MW-BS
W-11: MW-BD
W-12: MW-BR2
W-13: MW-D2
W-14: MW-I2S (formerly MW-Js new)
W-15: MW-BR8
W-16: MW-A
W-17: MW-HS
W-18: MW-H2D

(d) The following wells have also been designated as Surface Water Protection Wells:

W-3: MW-TS
W-5: MW-100
W-9: MW-CS
W-16: MW-A
W-13: MW-D2

(e) Water Supply Wells:

PW-1: 153 River Road

(ii) Parameter list

Parameter

1. Total Dissolved Solids
2. Total Suspended Solids
3. Alkalinity
4. COD
5. Iron (Total)
6. Manganese (Total)
7. Specific Conductance
8. Nitrate (as N)
9. Chloride
10. Hardness (as CaCO₃)
11. pH
12. Ammonia (as N)
13. Sodium (Total)
14. Potassium (Total)
15. Sulfate (Total)
16. All inorganics identified in Appendix I of 40 CFR Part 258 of the Federal Register, Vol. 56, No. 196, October 9, 1991, beginning page 51032 using EPA method 6010.
17. Volatile Organic Compounds identified in Appendix I of 40 CFR Part 258 of the Federal Register, Vol. 56, No. 196, October 9, 1991, beginning page 51032 using EPA method 8260
18. Beginning the first quarter after the Commissioner's approval of the report required under paragraph 3(C)(iv), any supplemental parameters identified in accordance with the requirements of paragraph 3(C).

- (iii) Schedule - The ground water quality monitoring program shall begin 30 days after confirmation that all monitoring wells, sampling devices and associated appurtenances have been installed, but not later than 90 days after permit issuance. Thereafter, the ground water quality monitoring locations in paragraph 3(B)(i) shall be monitored four times per year in accordance with the following schedule:

Sampling Periods

January
April
July
October

- (a) Each ground water sample collected from the monitoring wells designated in paragraph 3(B)(i)(a) as U-1, U-2, U-3, U-4, U-5, and U-6 shall be analyzed for the parameters listed in paragraph 3(B)(ii), items 1 through 17.
 - (b) Each ground water sample collected from the monitoring wells designated in paragraph 3(B)(i)(b) as C-1, C-2, C-3, C-4, C-5, and C-6 shall be analyzed for the parameters identified in paragraph 3(B)(ii), items 1 through 18.
 - (c) Each ground water sample collected from the monitoring wells designated in paragraphs 3(B)(i)(c) as W-1, W-2, W-4, W-6, W-7, W-8, W-10, W-11, W-12, W-14, W-15, W-17, and W-18 shall be analyzed for the parameters listed in paragraph 3(B)(ii), items 1 through 17.
 - (d) Each ground water sample collected from the monitoring wells designated in paragraphs 3(B)(i)(c) and 3(B)(i)(d) as W-3, W-5, W-9, W-13, and W-16 shall be analyzed for the parameters identified in paragraph 3(B)(ii), items 1 through 17, with the exception that for those parameters in item 16 for which a lower minimum level is specified in paragraph 3(A)(iii), laboratory analyses shall be performed using the lower minimum level.
 - (e) Each ground water sample collected from the water supply well designated in paragraph 3(B)(i)(e) as PW-1 shall be analyzed for the parameters listed in paragraph 3(B)(ii), items 1 through 17.
- (iv) Sampling Conditions - Field measurement of pH, temperature, specific conductance, turbidity, and Oxidation Reduction Potential shall be performed at all ground water monitoring locations in paragraph 3(B)(i) prior to each sample collection. In addition, the water level elevation shall be measured at all ground water monitoring locations in paragraphs 3(B)(i)(a), 3(B)(i)(b), 3(B)(i)(c), and 3(B)(i)(d). These field measurements shall be reported together with the results of analyses of the samples in accordance with paragraph 5.

- (v) Ground water monitoring shall be performed as described in the monitoring plan contained in the "Groundwater and Surface Water Monitoring Program" identified in paragraph 3 above, subject to the modifications listed below. Where the requirements of the permittee's monitoring plan conflict with those of this permit, the permit requirements shall be used.

Where specific sampling or redevelopment procedures are not specified in the monitoring plan or in the following paragraphs, the permittee shall follow applicable procedures identified in the following EPA guidance documents. "Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells", U.S. EPA, EPA/600/4-89/034, 1991; "RCRA Ground-Water Monitoring: Draft Technical Guidance", U.S. EPA, EPA/530-R-93-001, 1992; and the draft document "Low Flow (Minimum Stress) Purging and Sampling Procedure for the Collection of Ground Water Samples From Monitoring Wells", Revision Number 1 draft, U.S. EPA, dated August 3, 1995.

- (a) Redevelop all monitoring wells identified in paragraph 3(B)(i) of this permit, with the exception of well MW-HS.
- (1) Schedule - Redevelopment shall be completed within 60 days of issuance of this permit.
- (2) Methods - Redevelopment shall be performed for each well, using the procedure described below.

Measure the static water level and total well depth.

Set a pump in the well, and begin pumping. The pump must be capable of removing all sediment from the well. Monitor turbidity of the pump discharge using a field turbidimeter, and continue pumping until the turbidity decreases to 5 Nephelometric Turbidity Units (NTU) or stabilizes (defined as less than 10 percent variance in 3 consecutive measurements, taken 3 to 5 minutes apart).

Surge the well using a properly designed surge block and proper surging technique. Perform surging throughout the screened or open interval. Record total well depth.

Continue alternating cycles of pumping and surging as described above until the initial turbidity during the second of two consecutive pumping cycles, separated by a sufficient period of well recharge (with the pump shut off and left in place), does not exceed 5 NTU. The recharge period shall be at least the period of time needed for the water level in the well to return to within 0.5 feet of the static level, as corrected for tidal fluctuations.

Record static water level, total well depth, starting and ending time of each pumping and each surging cycle, volume of water pumped during each pumping cycle, water level at the start of each pumping cycle, initial and final turbidity of pump discharge during each pumping cycle, the manufacturer's name and model number of all equipment and instruments used in well development, and the name and address of all contractors and / or consultants involved in the work.

- (3) If, after redevelopment a well still yields water with turbidity exceeding 5 NTU, the permittee shall either abandon the well and replace it with a new well constructed in accordance with the "Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells", U.S. EPA, EPA/600/4-89/034, 1991, or demonstrate to the Commissioner's satisfaction that the well was properly completed and adequately developed, and that turbidity is an artifact of the geologic materials in which the well is installed. Information to be used in such a demonstration shall include, but be limited to, geologic logs, well construction diagrams, grain size analyses, calculations for sizing the sand pack and well screen to the geologic formation, and water quality data including turbidity and total suspended solids.
- (4) Within 90 days of issuance of this permit, the permittee shall submit a report for the Commissioner's review and approval which (1) summarizes all well redevelopment efforts, (2) identifies wells which must be replaced in accordance with paragraph 3(B)(v)(a)(3), (3) proposes a schedule, methods, and materials for old well abandonment

and new well construction, and (4) presents any demonstrations of well adequacy vs. persistent turbidity as a geologic artifact..

- (b) Within 90 days of issuance of this permit, the permittee shall install permanently dedicated, submersible sampling pumps in all monitoring wells identified in paragraph 3(B)(i) of this permit. All pumps and ancillary support cables, electrical wiring, and discharge tubing shall be new, clean material, constructed and installed such that all parts which may contact groundwater samples contain only stainless steel and / or fluoropolymers. The pumping rate shall be adjustable by means of a controller which controls the operating rate of the pump, and the pump / controller system shall be capable of a minimum flow rate no greater than 100 milliliters per minute with the discharge tubing unobstructed. Each pump shall be installed with the pump intake set at the midpoint of the saturated portion of the screened / open interval of the well.
- (c) The maximum pumping rate during purging and sampling shall not exceed 300 milliliters per minute.
- (d) During well purging and sample collection, the drawdown induced by pumping shall not exceed a depth of 0.3 feet below the static water level in the well. The following procedure shall be used to maintain a drawdown of less than 0.3 feet:
 - (1) Using a water level indicator, measure the static depth to water in the well, and set the indicator probe to a depth 0.3 feet below the static water level.
 - (2) During purging and sampling, verify that the water level indicator produces a continuous audible signal.
 - (3) If the signal from the water level indicator is interrupted, adjust the pumping rate downward as necessary until the signal returns.
 - (4) If, at the lowest possible pumping rate, the drawdown still exceeds 0.3 feet, modify the purging and / or sampling procedure by stopping the pump, waiting for the well to recharge, and then operating the pump intermittently such

that drawdown does not exceed 0.3 feet, until purging and / or sampling are completed.

- (e) Monitoring of field parameters shall not begin until a minimum volume equivalent to one pump volume plus one discharge tubing volume has been purged from the well. Successive field parameter measurements shall be conducted at time intervals no less than three minutes apart. Purging shall continue until turbidity stabilizes (defined as ten percent variance or, if less than ten NTU, differences of no greater than two NTU) for three successive measurements.

(C) Supplemental Ground Water Quality Monitoring

- (i) Location - Supplemental ground water quality monitoring shall be conducted at the following locations identified in paragraph 3(B)(i)

W-1: MW-SD (formerly MW-Js old)
W-2: MW-SS
W-3: MW-TS
W-4: MW-TD
W-5: MW-100
W-6: MW-BR1
W-7: MW-C
W-8: MW-CD
W-9: MW-CS
W-10: MW-BS
W-11: MW-BD
W-12: MW-BR2
W-13: MW-D2
W-14: MW-JS (formerly MW-Js new)
W-15: MW-BR8
W-16: MW-A
W-17: MW-HS
W-18: MW-H2D

- (ii) Schedule - Supplemental ground water quality monitoring shall be conducted for two consecutive quarterly sampling periods beginning the first scheduled quarterly sampling period after permit issuance.

- (iii) Parameters - Samples collected for supplemental monitoring shall be analyzed for the compounds identified in Appendix II of 40 CFR Part 258 of the Federal Register, Vol. 56, No. 196, October 9, 1991, beginning page 51033.
- (iv) Subsequent supplemental monitoring - On or before sixty (60) days after the second supplemental ground water quality monitoring event, the permittee shall submit for the review and approval of the Commissioner a report describing the results of the Appendix II monitoring required by this paragraph, and a plan for amending the ground water quality monitoring parameters at the compliance monitoring wells C-1, C-2, C-3, C-4, C-5, and C-6 identified in paragraph 3(B)(i)(b), and schedule listed in paragraph 3(B)(iii)(b) to include Appendix II compounds detected.
- (v) The samples shall be collected from each ground water monitoring location in accordance with the monitoring plan contained in the "Groundwater and Surface Water Monitoring Program" identified in paragraph 3 above.

(D) Precipitation Monitoring

- (i) Precipitation data to be used in preparing precipitation hydrographs shall be obtained from the Department of Environmental Protection's Flood Alert Center, for monitoring location No. 510, located along the Merritt Parkway in Orange.
- (ii) Reporting - The first reporting period shall be the period from the date of permit issuance to the following October 30. Thereafter, the reporting period shall be the period from November first to October 30 of the following year. The data to be reported shall be a precipitation hydrograph (in inches of precipitation per hour) for the station identified in paragraph 3(D)(i) above, for the reporting period. Precipitation hydrographs are to be prepared as follows: First, the instantaneous precipitation rate R_t (inches per hour) shall be calculated for each increment I (in inches) of precipitation measured during the reporting period using the formula

$$R_t = \frac{I}{T_t - T_{t-1}}$$

where T_t and T_{t-1} are the time values at which two consecutive increments are recorded. Second, the instantaneous rates shall be plotted using

straight lines joining the data points, but no symbol for the data points themselves. Third, each storm event on the hydrograph shall be labeled with the total precipitation (in inches of water) for that event. The x-axis of the precipitation hydrograph shall be referenced to the date (November first) and year of the start of the monitoring period, and scaled in months. The Y-axis shall be scaled and labeled in inches per hour. The data shall be reported in accordance with paragraph 5(B)(ii) of this permit.

(E) Ground Water Zone of Influence Compliance Monitoring

- (i) For ground water, the ground water zone of influence of the discharges for the southeast and northeast expansion areas, as identified in paragraphs 1(A) and 1(B) of this permit, which is hereby permitted shall not extend beyond property owned by the permittee. The ground water zone of influence of the discharge is defined as the soil and ground water area within which the treatment of leachate by soils and mixing of leachate with ground waters occurs and could reasonably be expected to occur and, therefore, within which some degradation of ground water quality has occurred or is anticipated to occur.
- (ii) The following requirements of this section will be used to determine whether the discharge of leachate has exceeded the boundaries of the permitted ground water zone of influence. All sampling shall be conducted in accordance with the monitoring plan contained in the "Groundwater and Surface Water Monitoring Program" identified in paragraph 3 above.
 - (a) Background Data Base - The compliance ground water quality monitoring wells identified in paragraph 3(B)(i)(b) of this permit shall be sampled monthly for twelve months, beginning with the first ground water quality monitoring event required in paragraph 3(B) of this permit. Sampling shall be conducted in accordance with the sampling conditions in paragraph 3(B)(iv) of this permit. Samples shall be analyzed for alkalinity, ammonia, chemical oxygen demand, chloride, hardness, total iron, potassium, sodium, specific conductance, and total dissolved solids. The results of all sampling and analyses during this twelve month period shall be reported in accordance with paragraph 5 of this permit. No later than 45 days after the collection of the final sample, a report shall be submitted for the review and approval of the Commissioner which describes the results of all sampling and analyses conducted

pursuant to this paragraph, proposes maximum background levels for all ten parameters, and recommends selection of at least four parameters for the ground water zone of influence compliance monitoring program. These parameters will be designated as compliance parameters. The maximum background level is defined for each parameter at each well as the maximum concentration measured during the twelve month monitoring period.

- (b) Exceedance - Any analytical result from any sample obtained from the compliance wells for each of the four compliance parameters which exceeds the maximum background level for that parameter as defined in paragraph 3(E)(ii)(a), shall constitute an exceedance.
- (c) Confirmed Exceedance - Any well for which an exceedance occurs shall be resampled within forty-five (45) days of the sampling event which established the exceedance and shall be analyzed for the parameter(s) causing the exceedance. If the second result is found to exceed the maximum background level for the same parameter(s), such result will constitute a confirmed exceedance. If the second result for the parameter(s) causing an exceedance does not exceed the maximum background level for that parameter, the ground water zone of influence compliance monitoring program shall resume its normal quarterly schedule. If the next quarterly sampling result is found to exceed the maximum background level for the same parameter(s) at the same compliance well, such result will constitute a confirmed exceedance. The permittee shall assure that the results of all sampling necessary to confirm an exceedance is received from the laboratory no more than 30 days from the date of sample collection.
- (d) Within 7 days of becoming aware of an occurrence of a confirmed exceedance as defined in paragraph 3(E)(ii)(c), the permittee shall notify the Commissioner in writing and within 60 days shall submit a report for the Commissioner's review and approval which explains the source and cause of the confirmed exceedance and provides a description of any extenuating circumstances.

(F) Leachate Monitoring

- (i) Leachate quality monitoring shall be conducted at the following locations as shown on Figure 2, entitled "Water Quality Monitoring Site Plan," (sic) contained in the monitoring plan contained in the "Groundwater and Surface Water Monitoring Program" identified in paragraph 3 above.

L-1S: Leachate collected in the liner system of the Southeast Expansion Area prior to the equalization tank.

L-1N: Leachate collected in the liner system of the Northeast Expansion Area prior to the equalization tank.

- (ii) Samples of leachate shall be analyzed for the parameters listed in paragraph 3(A)(iii), and with the addition of the following parameters:

- 33. Volatile organics by EPA Method 8260
- 34. Polychlorinated Biphenyls (PCBs) by EPA Method 608
- 35. dioxins and furans by EPA Method 8280

- (iii) Leachate samples shall be analyzed for parameters listed in paragraphs 3(A)(iii) and 3(F)(ii) numbered 1-33 between the 15th and 30th day of January, April, and October, and for the parameters numbered 1-35 between the 15th and 30th day of July.

(G) Sediment Monitoring

- (i) Two rounds of physical and chemical characterization of sediment quality and chemical analysis of the overlying water column shall be conducted; the first one in July 1997 and the second one in July 1999. Samples shall be collected at the following locations as shown on Figure 2, entitled "Water Quality Monitoring Site Plan," (sic) contained in the monitoring plan contained in the "Groundwater and Surface Water Monitoring Program" identified in paragraph 3 above.

S-1: Monitoring location is in the depositional area immediately upstream of the dam at River Road (Connecticut Route 110).

S-2: Monitoring Location is a transect across the Farmill River downstream of the O&G expansion area, but upstream of the confluence of the Farmill and Housatonic Rivers. The transect is comprised of three stations.

S-2S: Sample to be collected mid-way between the southern waterline and S-2M.

S-2M: Sample to be collected at the mid-point of the transect across the Farmill River, and coincides with the surface water monitoring location SW-2.

S-2N: Sample to be collected mid-way between the northern waterline and S-2M.

S-3: Monitoring location is in the Housatonic River Lagoon inlet. Station is located in the southern side of the inlet and coincides with the surface water monitoring location SW-3.

S-4: Monitoring location is in the Housatonic River Lagoon and coincides with the surface water monitoring location SW-4.

S-5: Monitoring location is in the Housatonic River Lagoon and coincides with the surface water monitoring location SW-5.

S-6: Monitoring location is mid-stream in the Farmill River south of the Leachate Treatment Facility and the discharge from Sediment Pool No.3.

(ii) Sediment samples from each of the six sampling locations identified in (C)(i) shall be analyzed (on a dry weight basis) for the following parameters:

(a) Samples from S-1, S-3, S-4, S-5, and S-6 shall be analyzed for the parameters 1s - 12s.

(b) Samples from S-2S, S-2M and S-2N shall be analyzed separately for parameters 1s - 9s, but may be composited for parameters 10s - 12s.

- 1s. Percent Moisture
- 2s. Grain Size Fractionation (including fines)
- 3s. Depth to Redox Potential Discontinuity (RPD)
- 4s. Total Carbon
- 5s. Total Inorganic Carbon
- 6s. Total Organic Matter
- 7s. Copper, total

- 8s. Lead, total
- 9s. Zinc, total
- 10s. Acid Volatile Sulfides, and SEMs by trace-ICP
- 11s. Polynuclear Aromatic Hydrocarbons
- 12s. Polychlorinated Biphenyls

(c) Analyses for total copper (7s) and total lead (8s) may be by Graphite Furnace Atomic Absorption Spectroscopy (GFAA) or Inductively Coupled Plasm analysis/Mass Spectroscopy (IAP/MS). Analyses for total zinc (s) may be by Inductively Coupled Plasm analysis (IAP) or IAP/MS. Results of analyses for 7s, 8s and s shall be reported together with the SEM results for these same metals (10s).

(iii) Water samples shall be collected from above each sediment sampling location in accordance with the conditions specified in 3(A)(iv) and the following conditions.

- (a) Water samples shall be collected within 0.5m of the sediment/water interface.
- (b) Water samples from above each sediment sampling station shall be collected when the sediment samples are collected.
- (c) Water samples from above each sediment sampling station shall be analyzed, at a minimum, for the parameters numbered 1 - 10, 20, 21, 24, 25, 31 and 32 in paragraph 3(A)(iii).

(H) Habitat Characterization

- (i) A detailed site map of the area in which the Shelton landfill is situated, at a scale of 1 inch equals 100 feet, shall be prepared to depict and identify the Farmill and Housatonic Rivers, flood boundaries, wetlands, anthropogenic structures (e.g. roads, dams, bridges, rail lines, sewer crossings), existing and potential pollutant sources (e.g. sewage treatment plants, gravel mining operations, existing and abandoned or closed landfills, highway garages, storm drainage, etc.). The map shall also depict all current and historical surface water, sediment, and biological monitoring locations, habitat characterization locations, and shall plot submerged aquatic vegetation and sediment type in the Farmill River. Permittee may refer to, and incorporate aerial photographs, local wetlands maps, sewer and

highway department plans, Coastal Area Management maps, etc. This map shall be included in the first annual report, and shall be updated for inclusion in each subsequent annual report, as required in paragraph 5(A).

- (ii) Two qualitative habitat characterizations of the area in which the Shelton landfill is situated shall be conducted; the first one in August 1997 and the second one in August 1999. The qualitative habitat characterization shall describe, in particular, the entire area in the vicinity of the Farmill River from River Road (Connecticut Route 110) east to its confluence with the Housatonic River, the shoreline along the Housatonic River Lagoon, and wetland areas in or near the landfill. A descriptive report of upland areas as they contribute to the ecology of the surface water system, and a description of nearby influences shall be included.
- (iii) The first annual report shall include the results of a bathymetric survey of the Housatonic River Lagoon. Results shall be presented in the form of a site map, prepared at a scale of one inch equal to one hundred feet, depicting depth contours within the lagoon at a minimum contour interval of five feet.
- (iv) Two quantitative habitat evaluations of the area within the statistical mean annual floodplain of the Farmill River shall be conducted; the first one in August 1997 and the second one in August 1999. The habitat characterizations shall be conducted using standardized and reproducible protocols that follow those recommended by Platts et al. (DA GTR INT-138) and incorporate the metrics required by the RBP III described by Plafkin, et al. (EPA/444/4-89-001), and shall include, at a minimum, Stream width; Stream depth and shore water depth; Location and extent of pool, riffle, run, and glide areas; Stream velocity; General channel morphology, elevation, gradient, and sinuosity; Stream bank, stability, vegetation; Stream bottom; Canopy; Submerged and emergent aquatic vegetation (%-cover, type).
- (v) Two benthic macro invertebrate community assessments of the Farmill River shall be conducted; the first one during August and October 1997, and the second in August and October 1999. The benthos shall be evaluated using U.S. EPA's Rapid Bioassessment Protocol, Level 3 (RBP III) as described by Plafkin, *et al.*, 1989. At least one kicknet and rock basket sampling location in riffle/run habitat shall be established. Rock baskets shall be deployed during the middle of August, and shall be retrieved during the first week of October. Concurrent with retrieval, kicknet and CPOM samples shall be collected from streambed locations

representative of the channel cross-section at each station. Samples shall be identified to species as required by RBP III and analysis of community structure. The permittee shall consult with DEP prior to initiating the first of the benthic macro invertebrate community assessments to establish the appropriate reference site and conditions.

- (vi) Results of the analyses of community structure, and of each habitat evaluation, including field and laboratory data sheets and updating of the map required by paragraph 3(H)(i) shall be submitted for the review and approval of the commissioner by inclusion in the annual reports in accordance with the requirements of paragraph 5(B)(i)(c)

4. Sample Analysis

- (A) All sample analyses required by this permit shall be performed by a laboratory certified for such analyses by the Connecticut Department of Public Health or approved in writing for monitoring at this facility by the Connecticut Department of Environmental Protection.
- (B) Analytical results for each parameter shall be reported together with the actual method detection limits achieved during the analysis. The value of each parameter shall be reported to the maximum level of accuracy and precision possible. Failure to submit data in accordance with the procedures and protocols set forth in this permit shall constitute a permit violation.
- (C) Chemical analyses for surface water, ground water, and leachate shall be performed using methods approved pursuant to the Code of Federal Regulations, Part 136 of Title 40, except where otherwise specified in paragraphs 3(B)(ii), 3(C)(iii), and 3(F)(ii), or unless an alternative method has been specifically approved in writing by the Commissioner for monitoring at this facility. Failure to use approved methods shall constitute a permit violation.
- (D) Analyses required by paragraphs 3(A), 3(B), and 3(F) shall be conducted to achieve the minimum levels for each of those parameters for which minimum levels are identified in 3(A)(iii), unless an alternative method that is capable of achieving the minimum levels has been specifically approved in writing by the Commissioner.

- (E) The minimum levels specified in paragraph 3(A)(iii) represent the concentration at which quantification must be achieved and verified during the chemical analyses for these compounds. Analyses for these compounds must include calibration points at least as low as the specified minimum level. Check standards within ten percent of the specified minimum level may be used in lieu of a calibration point equal to the minimum level.
- (F) If any sample analysis indicates that quantification for a particular parameter can not be verified at or below the specified minimum level, a second sample shall be collected and analyzed for that parameter according to the above specified methodology as soon as practicable. The results of the first and subsequent sample analyses shall be submitted to the Commissioner verifying that the appropriate methodology was employed, the minimum level was achieved for quality-control samples and that failure to quantify the parameter at or below the minimum level specified for the analysis was a result of matrix effects which could not be compensated for as part of sample analysis allowed pursuant to 40 CFR Part 136.
- (G) If any three (3) samples collected in a twelve-month period indicate that the specified minimum level was not achieved for a particular parameter when using the specified test methodology, the permittee shall submit a report for the review and approval of the Commissioner which justifies and defines the matrix effect upon analyses for that parameter, identifies the level at which quantification can be verified for those specific test conditions, and recommends modification to the method or an alternative method that is sufficiently sensitive and free of the identified matrix effect.

5. Reporting

(A) Schedule

The results of all sampling and analyses required by this permit, unless otherwise specified in writing by the Commissioner, shall be reported in accordance with the following schedule:

<u>Sampling periods</u>	<u>Reporting Dates</u>
January	March 21

April	June 21
July	September 21
October	December 21

(B) Annual Reports

- (i) Beginning on the first March 21 following permit issuance, and annually on or before that date thereafter, a summary report for the preceding one year period of the monitoring and inspection programs required by this permit shall be submitted for the review and written approval of the Commissioner.
 - (a) The report shall include but not be limited to a) an evaluation of leachate quality and quantity, including graphical representation of monitoring results, b) the condition of all monitoring wells and the need for repair or replacement of any wells, c) an evaluation of the extent and potential extent of the ground water zone of influence and whether any impact on the surface water quality of the Housatonic River or Far Mill River, or any other surface waters was detected or could reasonably be expected to occur, and d) a detailed site map of the area in which the Shelton landfill is situated, at a scale of 1 inch equals 100 feet.
 - (b) For the first annual report only, additional reporting of work required under paragraph 3(H)(iii) shall include a map showing the Housatonic River Lagoon bathymetry with a minimum contour interval of five feet, at a scale of one inch equal to one hundred feet.
 - (c) For the second and fourth annual reports, the following additional reporting of work required under paragraphs 3(G)(i), 3(H)(ii), 3(H)(iv), and 3(H)(v) shall be included: 1) results of the physical and chemical sediment analyses and accompanying water quality analyses; 2) a qualitative habitat characterization, 3) a quantitative habitat evaluation; and 4) benthic macro invertebrate community assessments.
 - (d) The second annual report and subsequent annual reports may propose modifications to the monitoring program for the Commissioner's review and written approval.

(ii) For the parameters and monitoring locations identified in this paragraph, additional annual reporting shall be required. The additional reporting shall consist of preparing graphs of parameter history versus precipitation hydrograph.

(a) Parameters and Locations -

One graph shall be prepared for each of the four compliance parameters identified in paragraph 3(E)(ii)(a) of this permit, for each of the following five pairs of wells: MW-TS and MW-TD; MW-BS and MW-BD; MW-CS and MW-CD; MW-D2D and MW-BR7; MW-E and MW-ED. In addition, one graph shall be prepared for ground water elevation measurements for each of the five well pairs listed above.

(b) Graph construction -

The graphs shall be constructed by plotting all values for a specific parameter at a specified pair of monitoring locations along the Y - axis, time along the X - axis, and the precipitation hydrograph along a second Y - axis. Data to be used for constructing the precipitation hydrograph shall be that required in paragraph 3(D). The following units shall be used: Parameters shall be plotted using the appropriate units, time shall be plotted as calendar months and years, and precipitation hydrograph shall be plotted in inches per hour. Beside each precipitation event, the graph shall be labeled with the total precipitation (in inches) for that event.

(C) The results of all analyses and measurements required by this permit shall, unless otherwise specified in writing by the Commissioner, be reported to the following three divisions of the Connecticut Department of Environmental Protection at 79 Elm Street, Hartford, Connecticut 06106-5127: 1) the Bureau of Waste Management, Waste Engineering and Enforcement Division; 2) the Bureau of Water Management, Permitting, Enforcement, and Remediation Division, State Remediation Program; and 3) the Bureau of Water Management, Planning and Standards Division, Aquatic Toxicity Program.

(D) The results of all analyses and measurements required by this permit shall also be reported to the Naugatuck Valley Health Department.

The permittee shall pay the annual compliance determination fee as set forth in the Regulations of Connecticut State Agencies including but not limited to Section 22a-430-7.

This permit is issued under Section 22a-430 of the Connecticut General Statutes and shall expire on August 27, 2001.

The Commissioner reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under federal or state law. This permit as modified or reissued under this paragraph may also contain any other requirements of federal or state law then applicable.

This permit shall be subject to the following sections of the Regulations of Connecticut State Agencies which are hereby incorporated into this permit:

Section 22a-430-3 General Conditions

- (a) Definitions
- (b) General
- (c) Inspection and Entry
- (d) Effect of a Permit
- (e) Duty
- (f) Proper Operation and Maintenance
- (g) Sludge Disposal
- (h) Duty to Mitigate
- (i) Facility Modifications; Notification
- (j) Monitoring, Records and Reporting Requirements
- (k) Bypass
- (l) Conditions Applicable to POTWs
- (m) Effluent Limitation Violations (Upsets)
- (n) Enforcement
- (o) Resource Conservation
- (p) Spill Prevention and Control
- (q) Instrumentation, Alarms, Flow Recorders
- (r) Equalization

22a-430-4 Procedures and Criteria

- (a) Duty to Apply
- (b) Duty to Reapply
- (c) Application Requirements

- (d) Preliminary Review
- (e) Tentative Determination
- (f) Draft Permits, Fact Sheets
- (g) Public Notice, Notice of Hearing
- (h) Public Comments
- (i) Final Determination
- (j) Public Hearings
- (j) Public Hearings
- (k) Submission of Plans and Specifications. Approval.
- (l) Establishing Effluent Limitations and Conditions
- (m) Case by Case Determinations
- (n) Permit issuance or renewal
- (o) Permit Transfer
- (p) Permit revocation, denial or modification
- (q) Variances
- (r) Secondary Treatment Requirements
- (s) Treatment Requirements for Metals and Cyanide
- (t) Discharges to POTWs - Prohibitions

Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(6), (j)(9)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of Section 22a-430-3.

Entered as a Permit of the Commissioner of the Department of Environmental Protection on 27 Aug 96.


Sidney J. Holbrook, Commissioner

Application No. 199502403

Permit No. LF0000052

APPENDIX A

LIST OF APPLICATION SUBMITTALS

CRRA Shelton Landfill Northeast Expansion Area Permit No. LF0000052

Groundwater Discharge Permit
Shelton Landfill

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"Shelton Landfill Groundwater Assessment, Shelton, Connecticut," August 1988, Fuss & O'Neill, Inc. (APP-11)

"Connecticut Resources Recovery Authority, Shelton, Connecticut, Discharge Permit Reapplication, DEP/WCU 126-104," July 1989, Fuss & O'Neill, Inc. (APP-12)

"Connecticut Resources Recovery, Shelton Landfill, 1990 Annual Summary Report," January 1991, Fuss & O'Neill, Inc. (APP-13)

"Connecticut Resources Recovery Authority, Shelton Landfill, Hazardous Waste Disposal Area, 1990 Annual Summary," February 1991, Fuss & O'Neill, Inc. (APP-14)

"Shelton Landfill Horizontal Expansion Development/Design Report Ash Monocells, 866 River Road (Route 110), Shelton, Connecticut, Volume I, Book I of II," July 1990, revised to January 1992, Fuss & O'Neill, Inc. (APP-3A)

"Shelton Landfill Horizontal Expansion Development/Design Report Ash Monocells, 866 River Road (Route 110), Shelton Connecticut, Volume I, Book II of II," June 1990, Revised to January 1992, Fuss & O'Neill, Inc. (APP-3B)

"Certificate of Need Information and Documentation," July 1990, revised to June 1992. (APP-4)

"Shelton Landfill Horizontal Expansion State Discharge Permit Application (SPDES) Pretreated Ash Leachate, 866 River Road (Route 110), Shelton, Connecticut, Volume III," June 1990, Revised to January 1992, Fuss & O'Neill, Inc. (APP-5)

"State Discharge Permit Application (SPDES) Groundwater Discharge, Volume IV," June 1990, Revised to January 1992, Fuss & O'Neill, Inc. (APP-6)

"Shelton Landfill Horizontal Expansion, 866 River Road (Route 110), Shelton, Connecticut, National Pollutant Discharge Elimination System Permit Application (NPDES) Storm Water Discharge, Volume V," January 1991, Revised to January 1992, Fuss & O'Neill, Inc. (APP-7)

"State Structure and Dredging Permit Application, Volume VI," July 1990, Revised to January 1992, Fuss & O'Neill, Inc. (APP-8)

"Future Public Use and Recreation Plan, Volume VII," July 1990, Revised to January 1992, Fuss & O'Neill, Inc. (APP-9)

"Quality Assurance/Quality Control Documentation, Geomembrane Liner Installation, Volume VIII," February 1991, Revised to January 1992, Fuss & O'Neill, Inc. (APP-10)

Groundwater Discharge Permit
Shelton Landfill

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"Technical Review for Landfill Permit Application for the Shelton Landfill Horizontal Expansion, Shelton, Connecticut," prepared by Roy F. Weston, Inc., January 1992. (APP-15)

Letter from Chris Recchia, CRRA, to Mike Harder, CTDEP, dated September 15, 1995.

Letter from Natural Resources Center, CTDEP, to Chris Recchia, CRRA, dated September 25, 1995.

Letter and attachments to Jim Fitting, CTDEP, from Debbie Denfeld, CRRA, dated September 29, 1995.

"Permit Application for Wastewater Discharge," September 1995, CRRA.

"Groundwater and Surface Water Monitoring Program for the Northeast Expansion Area," September 1995, CRRA.

"Leachate Prevention Plan for the Shelton Landfill," September 1995, CRRA.

"Compilation of Historical Analytical Monitoring Results," September 1995, CRRA.

"Hydrogeologic Investigation in the Northeast Expansion Area of the Shelton Landfill and Two Contiguous Properties to the North, Shelton Landfill," October 1995, Environmental Risk Limited.

"Precipitation Hydrographs, Northeast Expansion Area Shelton Landfill," October 1995, CRRA.

"Supplemental Information, Northeast Area Horizontal Expansion, CRRA Shelton Landfill Modification to Permit LF0000052," January 1996, CRRA.

"Groundwater and Surface Water Quality Monitoring Program for the Northeast Expansion Area, Southeast Expansion Area and MSW/Ash Area in Support of the CTDEP Groundwater Discharge Permit," September 1995, Revised May 1996, CRRA.

Table No. 1 and No. 2, and Appendices A, B, C, D, E, F, G, H, and I of "Groundwater and Surface Water Quality Monitoring Program for the Northeast Expansion Area, Southeast Expansion Area and MSW/Ash Area in Support of the CTDEP Groundwater Discharge Permit," submitted September 1995, revised to May 1996, May 31, 1996, CRRA.

"Groundwater and Surface Water Quality Monitoring Program for the Northeast Expansion Area and Southeast Expansion Area in Support of an Amendment of the CTDEP Groundwater Discharge Permit No. LF0000052," September 1995, revised June 12, 1996, CRRA.

Groundwater Discharge Permit
Shelton Landfill

Page 30

Letter and attachments to Jim Fitting, CTDEP, from Debbie Denfeld, CRRA, dated June 14, 1996.

Facsimile to Jim Fitting, CTDEP, from Debbie Denfeld, CRRA, dated June 17, 1996.



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

SEPTEMBER 5, 1997

BUREAU OF WATER MANAGEMENT



MINOR PERMIT MODIFICATION

CC: MT.
P.O.
BIO Tech, HRP

Ms. Deborah Denfeld
Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, CT 06103

Re: Shelton Landfill
Permit ID: LF0000052
Facility ID: 126-104
App. No.: 199502403

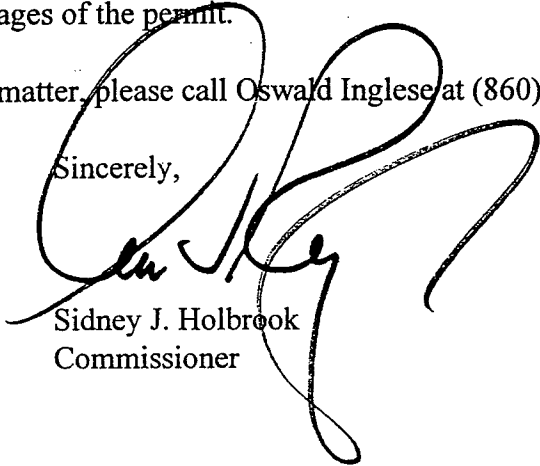
Dear Ms. Denfeld:

The Connecticut Resources Recovery Authority was issued a permit for the discharge of leachate from a municipal solid waste ash residue to the ground water in watershed of the Housatonic and Farmill Rivers. It has been requested by my staff that the permit be modified to reflect changes in the benthic monitoring program as described in paragraph 3(H)(v) of the permit. The changes to the permit will not result in a permit which is less stringent than the existing permit.

In accordance with the Regulations of Connecticut State Agencies Section 22a-430-4(p)(5)(B)(vi) of the Water Discharge Permit Regulations, I hereby modify the benthic monitoring program as described on pages 20 and 21 paragraph 3(H)(v) of permit LF0000052 and as shown on the attached modified pages of the permit.

If you have any questions regarding this matter, please call Oswald Inglese at (860)424-3725.

Sincerely,


Sidney J. Holbrook
Commissioner

SJH/rel

attachment

highway department plans, Coastal Area Management maps, etc. This map shall be included in the first annual report, and shall be updated for inclusion in each subsequent annual report, as required in paragraph 5(A).

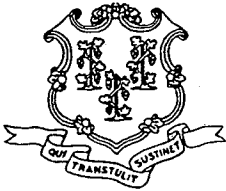
- (ii) Two qualitative habitat characterizations of the area in which the Shelton landfill is situated shall be conducted; the first one in August 1997 and the second one in August 1999. The qualitative habitat characterization shall describe, in particular, the entire area in the vicinity of the Farmill River from River Road (Connecticut Route 110) east to its confluence with the Housatonic River, the shoreline along the Housatonic River Lagoon, and wetland areas in or near the landfill. A descriptive report of upland areas as they contribute to the ecology of the surface water system, and a description of nearby influences shall be included.
- (iii) The first annual report shall include the results of a bathymetric survey of the Housatonic River Lagoon. Results shall be presented in the form of a site map, prepared at a scale of one inch equal to one hundred feet, depicting depth contours within the lagoon at a minimum contour interval of five feet.
- (iv) Two quantitative habitat evaluations of the area within the statistical mean annual floodplain of the Farmill River shall be conducted; the first one in August 1997 and the second one in August 1999. The habitat characterizations shall be conducted using standardized and reproducible protocols that follow those recommended by Platts et al. (DA GTR INT-138) and incorporate the metrics required by the RBP III described by Plafkin, et al. (EPA/444/4-89-001), and shall include, at a minimum, Stream width; Stream depth and shore water depth; Location and extent of pool, riffle, run, and glide areas; Stream velocity; General channel morphology, elevation, gradient, and sinuosity; Stream bank, stability, vegetation; Stream bottom; Canopy; Submerged and emergent aquatic vegetation (%-cover, type).
- (v) Two benthic macroinvertebrate community assessments of the Farmill River shall be conducted; the first one during October 1997 and the second in October 1999. The benthos shall be evaluated using U.S.EPA's Rapid Bioassessment Protocol (RBP), Level 3 as described by Plafkin, et al., 1989. At least one kick net sampling location in a riffle/run habitat in the Farmill River shall be established. An ecoregional reference or an upstream reference site shall also be established and sampled concurrently with the other site(s). Kick net and CPOM samples shall be collected from streambed locations representative of the channel cross-section at

each station. Subsampling the material collected, following procedures in RBP, is acceptable as long as a minimum 200 organism subsample is obtained. The number of organisms in the subsample should not be less than 10% of the target subsample value. Samples shall be identified to the lowest taxonomic level possible, preferably to the species level. The permittee shall consult with DEP prior to initiating the first of the benthic macroinvertebrate community assessments to establish the appropriate reference site, and discuss field and laboratory procedures.

- (vi) Results of the analyses of community structure, and of each habitat evaluation, including field and laboratory data sheets and updating of the map required by paragraph 3(H)(i) shall be submitted for the review and approval of the commissioner by inclusion in the annual reports in accordance with the requirements of paragraph 5(B)(i)(c)

4. Sample Analysis

- (A) All sample analyses required by this permit shall be performed by a laboratory certified for such analyses by the Connecticut Department of Public Health or approved in writing for monitoring at this facility by the Connecticut Department of Environmental Protection.
- (B) Analytical results for each parameter shall be reported together with the actual method detection limits achieved during the analysis. The value of each parameter shall be reported to the maximum level of accuracy and precision possible. Failure to submit data in accordance with the procedures and protocols set forth in this permit shall constitute a permit violation.
- (C) Chemical analyses for surface water, ground water, and leachate shall be performed using methods approved pursuant to the Code of Federal Regulations, Part 136 of Title 40, except where otherwise specified in paragraphs 3(B)(ii), 3(C)(iii), and 3(F)(ii), or unless an alternative method has been specifically approved in writing by the Commissioner for monitoring at this facility. Failure to use approved methods shall constitute a permit violation.
- (D) Analyses required by paragraphs 3(A), 3(B), and 3(F) shall be conducted to achieve the minimum levels for each of those parameters for which minimum levels are identified in 3(A)(iii), unless an alternative method that is capable of achieving the minimum levels has been specifically approved in writing by the Commissioner.



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
PRETREATMENT PERMIT



issued to

Connecticut Resources Recovery Authority
 100 Constitution Plaza, 17th Floor
 Hartford, CT 06103-1722

Location Address:

Shelton Landfill
 866 River Road
 Shelton, CT

Facility ID: 126-104

Permit ID: SP0001459

Permit Expires: June 27, 2011

RECEIVED
 CONN. RESOURCES
 RECOVERY AUTHORITY

01 JUL -2 AM 9:55

SECTION 1: GENERAL PROVISIONS

- (A) This permit is reissued in accordance with section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and a modified Memorandum of Agreement (MOA) dated June 3, 1981, by the Administrator of the United States Environmental Protection Agency which authorizes the State of Connecticut to administer a Pretreatment Program pursuant to 40 CFR Part 403.
- (B) Connecticut Resources Recovery Authority, ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of section 22a-430-3.

section 22a-430-3 General Conditions

- (a) Definitions
- (b) General
- (c) Inspection and Entry
- (d) Effect of a Permit
- (e) Duty
- (f) Proper Operation and Maintenance
- (g) Sludge Disposal
- (h) Duty to Mitigate
- (i) Facility Modifications; Notification
- (j) Monitoring, Records and Reporting Requirements
- (k) Bypass
- (l) Conditions Applicable to POTWs
- (m) Effluent Limitation Violations (Upsets)
- (n) Enforcement
- (o) Resource Conservation
- (p) Spill Prevention and Control
- (q) Instrumentation, Alarms, Flow Recorders
- (r) Equalization

section 22a-430-4 Procedures and Criteria

- (a) Duty to Apply
- (b) Duty to Reapply
- (c) Application Requirements
- (d) Preliminary Review
- (e) Tentative Determination
- (f) Draft Permits, Fact Sheets
- (g) Public Notice, Notice of Hearing
- (h) Public Comments
- (i) Final Determination
- (j) Public Hearings

RECEIVED
 CONN. RESOURCES
 RECOVERY AUTHORITY

01 JUN 32 AM 9:48

I CERTIFY THAT THIS DOCUMENT
 IS A TRUE COPY OF THE ORIGINAL.

Pamela D. Burney
 NAME
Processing Technician
 TITLE

DEPARTMENT OF ENVIRONMENTAL
 PROTECTION, BUREAU OF WATER
 MANAGEMENT

- (k) Submission of Plans and Specifications. Approval.
- (l) Establishing Effluent Limitations and Conditions
- (m) Case by Case Determinations
- (n) Permit issuance or renewal
- (o) Permit Transfer
- (p) Permit revocation, denial or modification
- (q) Variances
- (r) Secondary Treatment Requirements
- (s) Treatment Requirements for Metals and Cyanide
- (t) Discharges to POTWs - Prohibitions

- (C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the permittee to enforcement action, including but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.
- (D) Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157b of the CGS.
- (E) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner. To request such approval, the permittee and proposed transferee shall register such proposed transfer with the Commissioner at least 30 days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure by the transferee to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.
- (F) Nothing in this permit shall relieve the permittee of other obligations under applicable federal, state and local law.
- (G) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the Regulations of Connecticut State Agencies.
- (H) This permitted discharge is consistent with the applicable goals and policies of the Connecticut Coastal Management Act (section 22a-92 of the Connecticut General Statutes).

SECTION 2: DEFINITIONS

- (A) The definitions of the terms used in this permit shall be the same as the definitions contained in section 22a-423 of the CGS and section 22a-430-3(a) and 22a-430-6 of the RCSA.
- (B) In addition to the above the following definitions shall apply to this permit:

"—" in the limits column on the monitoring table means a limit is not specified but a value must be reported on the DMR.

"Average Monthly Limit" means the maximum allowable "Average Monthly Concentration" as defined in section 22a-430-3(a) of the RCSA when expressed as a concentration (e.g. mg/l); otherwise, it means "Average Monthly Discharge Limitation" as defined in section 22a-430-3(a) of the RCSA.

"Daily Concentration" means the concentration of a substance as measured in a daily composite sample, or the arithmetic average of all grab sample results defining a grab sample average.

"Daily Quantity" means the quantity of waste generated during an operating day.

"Instantaneous Limit" means the highest allowable concentration of a substance as measured by a grab sample, or the highest allowable measurement of a parameter as obtained through instantaneous monitoring.

"Maximum Daily Limit" means the maximum allowable "Daily Concentration" (defined above) when expressed as a concentration (e.g. mg/l); otherwise, it means the maximum allowable "Daily Quantity" as defined above unless it is expressed as a flow quantity. If expressed as a flow quantity it means "Maximum Daily Flow" as defined in section 22a-430-3(a) of the RCSA.

"NA" as a Monitoring Table abbreviation means "not applicable".

"NR" as a Monitoring Table abbreviation means "not required".

"Quarterly", in the context of a sampling frequency, means sampling is required in the months of January, April, July, and October.

"Range During Sampling" or "RDS", as a sample type, means the maximum and minimum of all values recorded as a result of analyzing each grab sample of; 1) a Composite Sample, or 2) a Grab Sample Average. For those permittees with continuous monitoring and recording pH meters, Range During Sampling shall mean the maximum and minimum readings recorded with the continuous monitoring device during the Composite or Grab Sample Average sample collection.

"Range During Month" or "RDM", as a sample type, means the lowest and the highest values of all of the monitoring data for the reporting month.

"ug/l" means micrograms per liter.

SECTION 3: COMMISSIONER'S DECISION

- (A) The Commissioner of Environmental Protection ("the Commissioner") has made a final determination and found that the continuance of the existing system to treat the discharge will protect the waters of the state from pollution. The Commissioner's decision is based on application #199805177 for permit reissuance received on December 16, 1998 and the administrative record established in the processing of that application.
- (B) The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or his authorized agent for the discharges and/or activities authorized by, or associated with, this permit.
- (C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Clean Water Act or the Connecticut General Statutes or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Clean Water Act or Connecticut General Statutes or regulations adopted thereunder which are then applicable.

SECTION 4: EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- (A) The discharge shall not exceed and shall otherwise conform to specific terms and conditions listed below. The discharge is restricted by, and shall be monitored in accordance with, the table below.

Table A

Discharge Serial Number: 001-1		Monitoring Location: 1							
Wastewater Description: Closed landfill leachate collection wastewater									
Monitoring Location Description: After the pH adjustment tank									
Discharge is to: The Town of Stratford Water Pollution Control Facility via its conveyance system									
PARAMETER	UNITS	FLOW/TIME BASED MONITORING			INSTANTANEOUS MONITORING			Minimum Level Test	
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency 1	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency		Sample Type or measurement to be reported
Barium, Total	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	NA
Chemical Oxygen Demand	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	NA
Copper, Total	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	NA
Flow, Average and Maximum 1	gpd	-----	55,000	Quarterly	Total Flow	NA	NR	NA	NA
Flow, Total	gpd	NA	55,000	Quarterly	Daily Flow	NA	NR	NA	NA
Lead, Total	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	NA
Nickel, Total	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	NA
pH	S.U.	NA	NA	NR	NA	6.0 - 10.0	Quarterly	RDS	NA
pH, Continuous	S.U.	NA	NA	NR	NA	6.0 - 10.0	Continuous	RDM	NA
Total Volatile Hydrocarbons	ug/l	NA	NA	NR	NA	-----	Quarterly	Grab	NA
Zinc, Total	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	NA

Table Footnotes and Remarks:

Footnotes:

1 For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each sampling month. (January, April, July and October)

2 The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample Frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

- (B) All samples shall be comprised of only those wastewaters described in this schedule, therefore, samples shall be taken prior to combination with wastewaters of any other type and after all approved treatment units, if applicable. All samples taken shall be representative of the discharge during standard operating conditions.
- (C) In cases where limits and sample type are specified but sampling is not required, the limits specified shall apply to all samples which may be collected and analyzed by, the Department of Environmental Protection personnel, the permittee, or other parties.
- (D) The limits imposed on the discharges listed in this permit take effect on the issuance date of this permit, hence any sample taken after this date which, upon analysis, shows an exceedance of permit limits will be considered non-compliance.

The monitoring requirements of this permit begin on the date of issuance of this permit if the issuance date is on or before the 12th day of a month. For permits issued on or after the 13th day of a month, monitoring requirements begin the 1st day of the following month.

SECTION 5: SAMPLE COLLECTION, HANDLING and ANALYTICAL TECHNIQUES AND REPORTING REQUIREMENTS

- (A) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall employ methods approved by the Environmental Protection Agency pursuant to 40 CFR 136 unless an alternative method has been approved in writing in accordance with 40CFR 136.4.
- (B) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40CFR136 unless otherwise specified.
- (C) The results of chemical analysis required above shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Water Management at the following address. The report shall also include a detailed explanation of any violations of the limitations specified. The DMR shall be received at this address by the last day of the month following the month in which samples are taken.

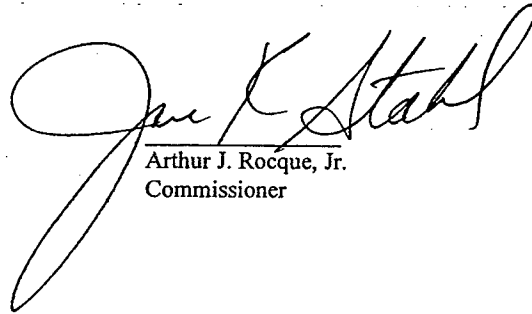
Bureau of Water Management (Attn: DMR Processing)
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

- (D) If this permit requires monitoring of a discharge on a calendar basis (e.g. Monthly, quarterly, etc.) but a discharge has not occurred within the frequency of sampling specified in the permit, the Permittee must submit the DMR as scheduled, indicating "NO DISCHARGE". For those permittees whose required monitoring is discharge dependent (e.g. per batch), the minimum reporting frequency is monthly. Therefore, if there is no discharge during a calendar month for a batch discharge, a DMR must be submitted indicating such by the end of the following month.
- (E) Copies of all DMRs shall be submitted concurrently to the local Water Pollution Control Authority ("WPCA") involved in the treatment and collection of the permitted discharge.

SECTION 6: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

- (A) If any sample analysis indicates that an effluent limitation specified in Section 4 of this permit has been exceeded, a second sample of the effluent shall be collected and analyzed for the parameter(s) in question and the results reported to the Bureau of Water Management (Attn: DMR Processing) within 30 days of the exceedance.
- (B) The Permittee shall immediately notify the Bureau of Water Management (Attn: Permits, Enforcement and Remediation Division) and the local WPCA of all discharges that could cause problems to the Publicly Owned Treatment Works ("POTW"), including but not limited to slug loadings of pollutants which may cause a violation of the POTW's NPDES permit, or which may inhibit or disrupt the POTW, its treatment processes or operations, or its sludge processes, use or disposal.

This permit is hereby issued on the 27th day of June, 2001.



Arthur J. Rocque, Jr.
Commissioner

AJR/cn

cc: Town of Stratford, POTW



Town of Stratford

WATER POLLUTION CONTROL

105 Beacon Point Road

Stratford, CT 06615

(203) 385-4065

Fax: (203) 381-2043

*A Town
For
All Seasons*

SPECIAL PERMIT TO DISCHARGE TO THE SANITARY SEWER

Permit Date: June 16, 2004

Permit Expires: June 16, 2009

Discharge Location: Connecticut Resources Recovery Authority (C.R.R.A.)
Shelton Landfill Ash Leachate Project
866 River Road, Shelton, CT 06484

Permit Issued To: Connecticut Resources Recovery Authority (C.R.R.A.)
100 Constitution Plaza – 17th Floor, Hartford, CT 06103-1722

- 1) It shall be required that the discharge be sampled and tested monthly for Biochemical Oxygen Demand (5-day), Total Suspended Solids and Total Nitrogen, with copies of these test results supplied to the Town.
- 2) C.R.R.A. shall utilize a certified laboratory approved by the Town for all sampling required. Copies of any and all testing done at this site for the D.E.P. or the E.P.A. shall be supplied to the Town.
- 3) C.R.R.A. shall pay all fees associated with the required sampling. The Town reserves the right to change the sampling parameters as needed.
- 4) Stratford Water Pollution Control shall be notified immediately as to any system malfunctions, system changes or problems which could impact or adversely affect the discharge to the sanitary sewer line.
- 5) If for any reason the City of Shelton, the D.E.P. or the E.P.A. disapprove C.R.R.A.'s application/permit, this permit shall also be disapproved/revoked.
- 6) A control manhole shall be maintained on this discharge line for sampling at a location approved by the Town. This installation shall be per Town Code Chapter 172-23.
- 7) The volume of wastewater discharged shall be recorded by a non-resettable meter. The meter to be used must be approved by the Town and designed for the intended purpose.
- 8) It shall be the responsibility of the applicant to obtain all permits necessary. It shall also be the applicant's responsibility to pay all costs associated to this.
- 9) The Town reserves the right to make revisions to this permit at any time and to discontinue this connection into the sanitary sewer line if it is found to affect the operation or discharge permit of the Town's Water Pollution Control Facility or limit the Town's expansion. This right is stated in the Town Code Chapter 172-50.
- 10) This permit shall expire on June 16, 2009. The Town shall be notified sixty days in advance of this expiration date if renewal is required.



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



July 7, 1994

APPROVAL

RECEIVED
CONN. RESOURCES
RECOVERY AUTHORITY
24 JUL 12 AM 9:29

Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, CT. 06103

Attention: Mr. Chris Recchia

Re: Application No. 91-145
DEP/WPC No. 126-104
Town of Shelton
Housatonic River Watershed

Dear Sir:

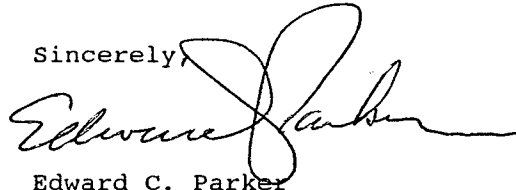
Connecticut Resources Recovery Authority (CRRRA) is hereby authorized to install and operate a resource recovery ash residue leachate collection and pretreatment facility for service of the southeastern area horizontal expansion at the Shelton Landfill, located on 866 River Road, Shelton, CT., and consisting of the following: an environmentally controlled leachate monitoring and control vault with full system control panel providing dual pumping regulation for all primary and secondary leachate collections from the four(4) ash holding cells; a dual lift pump leachate lift station together with level controls; an ash transport truck wheel washing facility with 3,000 gallon precast concrete sedimentation chamber for the effluent; a 30,000 gallon steel double walled ash leachate and wheel wash effluent holding tank with epoxy (Plasite 9060) interior coating, level alarm system and leak detector alarm system; dual leachate transfer pumpage to the leachate pretreatment facility which contains a 500 gallon polypropylene pH adjustment tank with stainless steel mixer and secondary containment; two(2) - 50 gallon polypropylene reagent tanks with chemical metering pumps and secondary containment; a full pretreatment system control panel, automatic sampler, pH and flow recorders; a sewage system lift station with dual pumpage and level controls, and associated equipment for pretreating and discharging a maximum flow of 28,800 gallons per day of treated ash leachate to the Town of Stratford sewerage system as described in plans and operations and maintenance manuals submitted by Wehran Engineering Corporation and Carlin Contracting Company, Inc., on January 18, 1994 and amended on February 1, 1994.

The leachate and wheel wash effluent collection and pretreatment systems and associated operation and maintenance manuals are hereby approved in accordance with Section 22a-430 of the Connecticut General Statutes.

This approval does not relieve you of the obligation to obtain any other authorizations as may be required by Federal, State or Locals Laws or Regulations.

If you have any questions regarding this matter, please contact Joseph A. Holmes at 566-5903.

Sincerely,

A handwritten signature in cursive script, appearing to read "Edward C. Parker". The signature is written in black ink and is positioned above the typed name.

Edward C. Parker
Director
Bureau Water Management

ECP/JAH/ar

cc: Solid Waste
John England
Dave McKeegan



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



April 22, 1993

APPROVAL

Connecticut Resources Recovery Authority
179 Allen Street
Hartford, CT. 06103

RECEIVED
CONN. RESOURCES
RECOVERY AUTHORITY

93 APR 26 AM 11:23

Re: Application No. 91-115
DEP/WPC - 126-104
Town of Shelton
Housatonic River Watershed

Dear Mr. Darcy:

Connecticut Resources Recovery Authority, "CRRA" is hereby authorized to install a waste water transfer and neutralization system, a 30,000 gallon holding tank, a discharge pumping station and all associated piping and mechanical equipment for the treatment of a maximum flow of 28,800 gallons per day of treated ash residue leachate prior to being discharged to the municipal sewerage system in the Town of Stratford in accordance with plans and specifications prepared by Fuss & O'Neill, Inc. and filed with this Department on January 14, 1993. This action is further found to be consistent with the applicable policies of the Connecticut Coastal Management Act (Section 22a-92 of the Connecticut General Statutes).

This approval is granted subject to the following conditions:

- (1) The applicant shall notify this Department at least 10 days prior to the start of the construction of the systems.
- (2) The applicant shall retain a Professional Engineer licensed to practice in the State of Connecticut to provide the following services.
 - (a) The engineer shall exercise construction administration over the system's installation to ensure conformance with the approved plans and specifications.
 - (b) The engineer shall prepare record drawings of the installed systems showing all component locations and elevations. These drawings shall be maintained at the site and in the main offices of CRRA .
 - (c) The engineer shall provide a certification to DEP and CRRA that all approved systems have been constructed as approved.

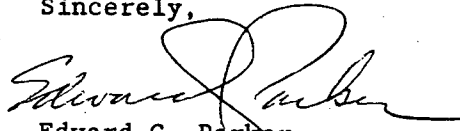
The applicant's attention is directed to the requirements of Section 22a-430 of the Connecticut General Statutes as amended that a permit must be obtained before initiation of a discharge. This approval does not constitute that permit to discharge under Section 22a-430. Upon verification that the actions hereby approved have been completed to the satisfaction of the Commissioner, said permit shall be issued.

This approval is the notification required by Section 22a-430 of the Connecticut General Statutes as amended.

This approval does not relieve you of the obligation to obtain any other authorizations as may be required by Federal, State or Local laws or regulations.

If you have any questions regarding this matter, please contact Beatriz Milne at 566-5903.

Sincerely,



Edward C. Parker
Director
Bureau of Water Management
Permitting, Enforcement & Remediation Div.

EP/BM/ar

cc: Fuss & O'Neill, Inc., Lawrence Murphy
POTW Superintendant, Ronald Brenton



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

October 17, 1989

OCT 23 12 25 PM '89

Mr. Paul R. Mazzacarro
Project Manager
Connecticut Resource Recovery Authority
179 Allyn Street, Suite 603
Hartford, Connecticut 06103

Re: Closure of Shelton Landfill Hazardous Waste Disposal Area

Dear Mr. Mazzacarro:

This letter has been prepared in response to your submittal of closure certification documentation. The United States Environmental Protection Agency, Region I (USEPA-Region I) and the Connecticut Department of Environmental Protection (CTDEP) have reviewed your documentation, appurtenant plans and specifications and have conducted an on site inspection of the closed unit at Shelton Landfill. Both Agencies have determined that the hazardous waste management area of the Shelton Landfill, owned by the Connecticut Resource Recovery Authority and located in Shelton, Connecticut has been closed in accordance with Title 40 Part 265 Subpart "G" of the Code of Federal Regulations (40 CFR 265 Subpart G) and Section 22a-449-(c)-29 of the Connecticut Hazardous Waste Management Regulations (CT HWMR).

Accordingly, pursuant to 40 CFR 265.143(h) Subpart H and Section 22a-449(c)-30 CT HWMR, the Connecticut Resource Recovery Authority is no longer required by 40 CFR 265.143 Subpart H and Section 22a-449-(c)-30 CT HWMR to maintain financial assurance for closure. Also, pursuant to 40 CFR 265.147(e) Subpart H and Section 22a-449-(c)-30 CT HWMR, you are no longer required by 40 CFR 265.147 Subpart H and Section 22a-449-(c)-30 CT HWMR to maintain liability coverage for your facility.

Please be advised that the above does not relieve you of the post-closure obligations specified in your approved post-closure plan or the post-closure financial assurance requirements specified in 40 CFR 265.145 Subpart H and Section 22a-449-(c)-30 CT HWMR. These requirements remain applicable throughout the post-closure period.

RECEIVED

OCT 17 1989

HAZARDOUS MATERIALS
MANAGEMENT UNIT

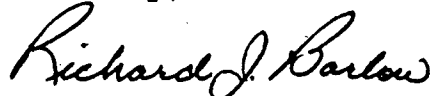
If you have any questions, please contact Mr. Michael Hill (USEPA - Region I) at (617) 573-9653 or Mr. George Dews (CTDEP) at (203) 566-2264.

Sincerely,



Merrill S. Hohman, Director
Waste Management Division
U.S. EPA - Region I
Boston, MA 02203-2211

Sincerely,



Richard J. Barlow, Chief
Waste Management Bureau
Dept. of Environmental
Protection
State Office Building
165 Capitol Avenue
Hartford, Connecticut 06106

cc: George Dews, CTDEP
Vicki Gerwert, Fuss & O'Neill
William LaRovera, Archer Landfill
Michael Hill, EPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

November 29, 1995

Connecticut Resource and Recovery Authority
179 Allyn Street
Hartford, CT 06103

To Whom It May Concern:

I am writing to clarify for you a recent change in the United States Environmental Protection Agency (EPA) policy regarding the "Deferred" decision for Archer Landfill located on River Road in Shelton, Connecticut (EPA Identification Number: CTD000604546).

The Archer Landfill site was deferred to the EPA Resource Conservation and Recovery Act (RCRA) Subtitle C program on September 1, 1984. A search of our files does not show that you, as an owner, operator or other interested party, were ever notified of that decision. The purpose of this letter is to provide you with formal notification of EPA's decision.

The deferral decision means that no further work is anticipated at this site by the federal Superfund Site Assessment program. Sites receive a "Deferred" decision when the federal Superfund Site Assessment program has completed its assessment of a site, and has determined that no further steps will be taken to list a site on the National Priorities List (NPL or "Superfund List"), because the site is being addressed under RCRA Corrective Action authorities.

Sites deferred to the RCRA Subtitle C program are removed from the federal Superfund program's inventory of known and suspected hazardous waste disposal sites (the Comprehensive Environmental Response, Compensation and Liability Information System or CERCLIS database). They are archived as historical records to ensure that these investigations are not needlessly repeated in the future.

Deferred sites are also subject to state jurisdiction, and further actions may be required at this site by the state. You may wish to contact the state to verify the status of your property with regard to state authorities. The contact for the Connecticut Department of Environmental Protection is Doug Zimmerman, who may be reached at (203) 424-3800.

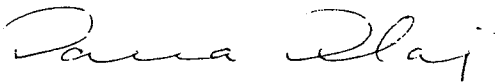


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contains at least 75% recycled fiber

Finally, "Deferred" decisions may be changed based upon new information or other considerations which make a recommendation for listing appropriate at a later time. In such an instance, you will be notified and the site will be returned to the CERCLIS database with the "Deferred" decision removed.

For further information regarding the status of this site under the RCRA Subtitle C program, please contact Ernie Waterman, who may be reached at (617) 223-5511. If you have any questions regarding the removal of this site from the CERCLIS inventory, I may be reached at (617) 223-5524.

Sincerely,

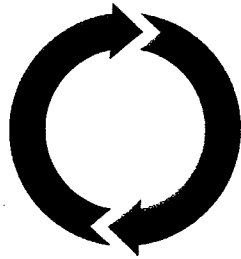


Daria Dilaj
Site Assessment Manager
Waste Management Division

cc: Doug Zimmerman, CT DEP
Ernie Waterman, EPA

**REQUEST FOR PROPOSALS
FOR
SHELTON LANDFILL POST-CLOSURE ENVIRONMENTAL
LIABILITY AND RISK TRANSFER**

**SECTION 17
SHELTON LANDFILL CHAPTER
OF
“ANNUAL LANDFILL CLOSURE AND POST-
CLOSURE CARE EVALUATION FOR GASB 18
COSTS – STATUS AS OF JUNE 30, 2007”**



**CONNECTICUT
RESOURCES
RECOVERY
AUTHORITY**

**ANNUAL
LANDFILL CLOSURE AND
POST-CLOSURE CARE EVALUATION
FOR GASB 18 COSTS**

STATUS AS OF JUNE 30, 2007

September 4, 2007

SHELTON LANDFILL

3. SHELTON LANDFILL - BRIDGEPORT PROJECT

The Shelton Landfill, which is part of the CRRA Bridgeport Project, is located at 866 River Road (State Route 110), Shelton, Connecticut 06484. The Landfill is closed.

A site drawing of the Shelton Landfill appears on Page Shelton-13.

3.1 Status And Recent Activity

3.1.1 Status

The Shelton Landfill is closed. No waste has been received at the Landfill since February 1998. CTDEP certified the Landfill as closed in April 2001.

The Shelton Landfill originally served as the MSW landfill for the Town of Shelton and for several surrounding communities. CRRA acquired the facility in 1983 and used it to dispose of MSW. When the Bridgeport Resource Recovery Facility began operations in 1988, CRRA used the Landfill to dispose of MSW combustor ash from the Bridgeport Facility.

The Landfill has three adjacent, but distinct, disposal areas: the older MSW/Ash Area and the two newer Northeast and Southeast Lined Ash Areas. The MSW/Ash Area was closed in Fall 1997, the Southeast Lined Ash Area in Fall 1999 and the Northeast Lined Ash Area in May 2000. Several systems continue to operate at the Landfill, including the gas handling system for the MSW/Ash Area and the leachate collection and pretreatment systems for the Southeast and Northeast Lined Ash Areas.

CTDEP issued a Consent Order in February 1998 to address side slopes on the Northeast and Southeast Lined Ash Areas, the handling of gas condensate and an investigation to determine the zone of influence of the MSW/Ash Area. After CTDEP reviewed and approved a revised Work Plan for the plume investigation, CRRA increased the estimate of the cost of the investigation.

In August 1999 the landfill gas collection and destruction system malfunctioned resulting in off-site gas migration. The costs to remedy the situation, provide operational oversight, obtain new gas system components, and upgrade gas monitoring are reflected in the actual costs for FY 2000 through 2004 as well as in the estimated costs for future years of maintenance and monitoring.

CTDEP and the Town have required CRRA to develop a vegetative landscape of trees on the west slope of the landfill. Costs were added for this purpose for FY 2002, but have yet to be expended.

In Spring 2001, CRRA and CTDEP agreed to a scope of activity for a future (passive) use recreation plan. The Plan includes walking trails and small watercraft access to the Housatonic Lagoon (and River) from areas around the base of the Southeast Lined Ash

Area. Costs were added to the estimates for FY 2002 for the design, construction and oversight of the Plan, but have yet to be expended. CRRA now anticipates that they will not be expended until FY 2010.

3.1.2 Recent Activity

The report summarizing the zone of influence study resulting from the 1998 Consent Order was submitted to CTDEP in March 2003. The study concluded that the plume has traveled southerly and then easterly to the Housatonic River Lagoon, and not west-erly, across route 110. Due to tidal influences and other subsurface hydrogeologic fac-tors, the Far Mill River is not a receptor of the groundwater discharging from the Shel-ton Landfill. In addition, the plume's groundwater zone of influence does not extend beyond the northern property boundaries and the plume is not degrading surface water quality below the standards established by CTDEP for that class of water body. There-fore, no long-term costs for remediation work are included in the cost estimates at this time.

3.2 Historical Summary

The Shelton Landfill (including the Housatonic Lagoon) was the former site of sand and gravel mining operations. Alfred Gallucci, who owned the site, allowed MSW to be disposed there as early as the 1960's. Sometime later, the Archer Company leased the property from Mr. Gal-lucci and operated the site as a landfill. The Archer Company obtained a permit from the City of Shelton for this purpose. Through April 1983, these operations on the 110-acre parcel re-sulted in a mound of MSW approximately 40 feet high covering approximately 38 acres. CRRA purchased the Shelton Landfill from Mr. Gallucci in November 1983.

3.2.1 MSW/Ash Area

After CRRA purchased the landfill, it continued to dispose of MSW. In February 1988, the Bridgeport Resource Recovery Facility went into operation. CRRA began to dis-pose of the incinerator ash from the Bridgeport Facility on top of the MSW that had been previously disposed. The CTDEP permit for the ash disposal required a much more comprehensive environmental (ground and surface water) monitoring program.¹ In January 1990, CTDEP approved a vertical expansion of the landfill to a final fill elevation of 174 feet NGVD. In addition, ash was applied to the upper half of the south-facing slope in 1994 after relocating the access road and filling to allowable grades. The MSW/Ash Area stopped receiving ash residue on August 10, 1994.

CRRA had contracted with Resource Technology Corporation² (RTC) to operate a gas-to-energy system at the site. Closure of the MSW/Interim Ash Area was interrupted to install additional gas extraction wells for a gas-to-energy project.

¹ CTDEP Permit No. LF0000023.

² Resource Technology Corporation is the successor to Resource Recovery Associates Limited Partnerships, the origi-nal contractor.

Prior to final closure, CRRA undertook an investigation of existing cover soils on the MSW/Ash Area. Several deficiencies were found in the cover. They were remedied and were re-seeded to establish a dense vegetative cover. This work was completed in 1997. The closure certification was submitted to CTDEP on September 23, 1997. In October 1997, CTDEP certified the Area as closed contingent on specified site details to be added to the as-built mapping. The mapping work was completed in Fall 1998.

3.2.2 Metal Hydroxide Cell

Metal hydroxide sludge was received at the Landfill from 1980 to 1983 and was disposed in a designated area on the northeast portion of the MSW landfill. It was deposited on a five-foot thick layer of fill that separated it from the underlying MSW. Metal hydroxide sludge is a RCRA hazardous waste (Waste Code F006). The 1.7-acre Metal Hydroxide Cell was closed in Summer 1988. A liner cover was installed over the Cell. The area was certified as closed in October 1989.³

Since the Metal Hydroxide Cell is a hazardous waste facility, not a Subtitle D MSW facility, it is not covered by GASB 18 and not considered further in this Annual Evaluation.

3.2.3 Southeast Lined Ash Area

The Southeast Lined Ash Area is a 7-acre monocell. On April 19, 1994, CTDEP issued a solid waste permit to operate the Area.⁴ CRRA began disposing of incinerator ash in the Southeast Lined Ash Area on August 10, 1994. As part of the approval to operate the Southeast Lined Ash Area, CTDEP required a significant increase in monitoring efforts. These included eight additional groundwater monitoring wells and four additional surface water-sampling locations⁵; quarterly stormwater discharge monitoring⁶ and ash leachate monitoring⁷.

The Southeast Lined Ash Area was scheduled to stop receiving waste when the Northeast Lined Ash Area opened. Because of delays in opening the Northeast Lined Ash Area (see below), CRRA had to increase the capacity of the Southeast Lined Ash Area by changing the 3:1 side slope grades of the original design to 2:1 grades with benching. The Southeast Lined Ash Area stopped receiving waste in June 1996.

A Posi-Shell[®] interim cover was installed on the Southeast Lined Ash Area in Fall 1996. In Summer 1997, the Area was reshaped to improve the benching. Another Posi-Shell[®] cover was installed in Fall 1997. Final closure operations were resumed in Summer 1999 and completed in May 2000. CTDEP certified the closure of the Area in

³ The Cell was closed in accordance with USEPA's regulations (40 CFR Part 265 Subpart G) and CTDEP's regulations (RCSA 22a-449-(c)-29).

⁴ Solid Waste Permit No. 1260227. Before issuing the permit CTDEP reviewed and approved the record drawings of the liner base, operations and maintenance manuals and the final inspections.

⁵ Required by Groundwater Discharge Permit No. LF 0000052.

⁶ Required by NPDES Permit Number CT 0028851.

⁷ Required by Sanitary Discharge Monitoring Permit No. SP 0001459.

May 2000. CTDEP again certified the closure of the Area in April 2001 in conjunction with the closure of the Northeast Lined Ash Area.

3.2.4 Northeast Lined Ash Area

Construction of the 3.5-acre Northeast Lined Ash Area began in Winter 1995-96. However, that was a very harsh winter and there were excessive rains in the Spring of 1996. This resulted in a delay in completion of the Area and it was not opened until June 1996. The operation that screened metals from the ash residue⁸ was moved from the Southeast Area to the Northeast Area. This move permitted the final re-grading of the Southeast Area.

The Northeast Lined Ash Area was almost full by April 1997. Beginning then, the screened ash from the Bridgeport Resource Recovery Facility was shipped to the Hartford Landfill Interim Ash Area. In the meantime, CRRA increased the capacity of the Northeast Lined Ash Area by switching to 2:1 benched side slopes. The ash was again shipped to the Northeast Lined Ash Area from December 1997 until February 1998, when the Northeast Area again reached capacity. Final closure of the Northeast Lined Ash Area was completed in October 1999 and CTDEP certified it as closed in April 2001. Since March 1998, the ash from the Bridgeport Resource Recovery Facility has been shipped to other landfills. From March 1998 to June 1999 it was shipped out-of-state. Since then it has been shipped to a Subtitle D landfill in Putnam, Connecticut.

3.3 Final Cover And Future Use

The final cover of the MSW/Ash Area consists of an 18-inch (minimum) layer of low permeability soil, a 6-inch layer of topsoil and dense vegetation. The final cover of the Southeast and Northeast Lined Ash Areas consists of a sand bedding layer, a geomembrane cap, a drainage layer, a topsoil layer and vegetation. All areas are certified as closed. All maintenance and monitoring costs are considered post-closure care costs.

CRRA submitted a Future Public Use and Recreation Plan to CTDEP on August 5, 1993. Early in 2001, CRRA, in conjunction with the CTDEP, revised the Plan to limit the public access area to the area around the Southeast Lined Ash Area. CTDEP agreed to this because of concerns about liability if public access were allowed around the MSW/Ash Area given the activities that were going on in that Area.⁹ Costs associated with implementation of the Plan were added to maintenance and monitoring costs beginning with FY 2002, but have not yet been expended. CRRA now anticipates that the Plan will not be implemented and the funds expended until FY 2010.

⁸ The separated metals were removed from the site by a metals recycling company.

⁹ Those activities include installation of additional gas extraction wells and installation of additional gas monitoring equipment. In addition, there are points of settlement in the Area and active operating equipment for both the gas and leachate collection systems.

3.4 Maintenance And Monitoring Activities

3.4.1 Stormwater and Erosion Control

There are five stormwater outfalls for the Shelton Landfill. Pursuant to the CTDEP general permit for stormwater discharges, four representative locations are sampled on an annual basis.¹⁰ The discharges lead to the Far Mill River (a tidal tributary to the Housatonic River), or the Housatonic Lagoon, which is hydraulically connected to the Housatonic River. The sedimentation basins for the five stormwater outfalls are cleaned on an as needed basis.

3.4.2 Groundwater and Surface Water Quality Monitoring

Until October 1994, two separate quarterly groundwater monitoring reports were required, one for the MSW/Ash Area for CTDEP and another for the Metal Hydroxide Cell for CTDEP and USEPA. With CTDEP's approval, the reports were combined beginning with the October 1994 quarterly report.

The hazardous waste monitoring program for the Metal Hydroxide Cell has historically had statistically significant levels of several parameters at two down-gradient wells. The recent MSW/Ash Area plume investigation, however, concluded that the existing monitoring program needs to be revised to account for the fact that the groundwater up-gradient of the cell has been impacted by the MSW/Ash Area plume. The five wells used for sampling under this program include two that are also used under the groundwater discharge permit monitoring program.

Domestic wells across State Route 110 from the Landfill and lysimeters had previously been monitored under the groundwater discharge permit. However, the properties where the domestic wells were monitored have been provided with a public drinking water supply and the lysimeters dried up years ago. Neither is monitored any longer.

When the Southeast Lined Ash Area opened in 1994, CRRA was required to sample, on a quarterly basis, eight additional groundwater monitoring wells, six surface water locations and two ash leachate sewer discharge locations.

CRRA began implementing some of the USEPA Subtitle D measures in its monitoring program during FY 1995. This resulted in sampling and testing for additional field parameters and expanding the list of metals for analysis. During FY 1996, an engineer consultant requested a lower flow rate for sample collection to obtain more accurate results. This increased field-sampling time and costs.

When the Northeast Lined Ash Area was developed, CTDEP revised the groundwater discharge permit to establish a comprehensive monitoring program that met USEPA's Subtitle D MSW landfill requirements. The amended permit provided for monitoring

¹⁰ Until May 1999, there was also an NPDES stormwater discharge permit which required quarterly sampling. CTDEP revoked the NPDES permit in May 1999 recognizing that the requirements of the general permit were sufficient.

of well clusters wherever possible, added ash leachate sampling locations, expanded the surface water monitoring program and added USEPA Appendix II VOC monitoring for two sampling events. Also added was a quantitative and qualitative habitat characterization of the Far Mill River and Housatonic Lagoon. The modified permit requires the following:

- (a) Monitoring a total of 30 groundwater wells;
- (b) Monitoring one water supply well (no longer in use);
- (c) Monitoring two ash leachate sample locations;
- (d) Monitoring 12 surface water sampling points;
- (e) An expanded list of parameters to be monitored;
- (f) Lower laboratory analysis detection levels; and
- (g) Two detailed habitat characterizations.

3.4.3 Gas Collection System And Monitoring

Two gas collection and flaring systems were established at the site during the early 1990's to mitigate off-site gas migration. Initially, 18 gas extraction wells, located in the interior of the MSW/Ash Area, were piped to a gas flare that was at the southern part of the landfill. A separate gas extraction and collection system with 42 extraction well points was installed along the lower side slopes of the western and northern sides of the MSW/Ash Area with a flare at the northern part of the landfill. This northern flare had a history of problems and gas was often vented off at the flare rather than burned. The northern flare was removed after the perimeter gas extraction system was tied into the southern gas flare.

RTC constructed and brought on-line in June 1995 a gas-to-energy facility. RTC developed approximately 50 additional gas extraction wells. The system was expected to have a productive life of 12 to 15 years. It would then have a much-reduced level of gas in-flow and operate on an intermittent or standby basis. Under the lease with CRRA, RTC was responsible for the operation and maintenance of the gas collection system. CRRA was responsible for disposal of the condensate collected by the system.

The RTC Cogeneration Facility consisted of two engines to convert the gas into energy. The southern flare was to be the backup treatment for the gas. RTC had difficulties with the engines. One had to be removed to be rebuilt and the other was in service only intermittently. As a result, the southern flare was in use almost continuously.

After the August 1999 gas migration incident (Refer to Section 1, Recent Activity), which resulted from RTC's negligence in system operations, CTDEP found RTC in violation of its permits. CRRA immediately took over operation of the system to ad-

dress the situation. CRRA installed two temporary "candlestick flares," made improvements to the gas extraction system wells and collection piping, installed additional gas monitoring equipment and provided oversight of the operation of the systems. Actual costs for this work are reflected in the FY 2000 through 2004 figures and cost estimates for future years.

3.4.4 Leachate Collection System And Monitoring

There is no leachate collection or treatment system associated with the unlined MSW/Ash Area. If a leachate seep is identified during an inspection, it is repaired.

The Southeast and Northeast Lined Ash Areas have a leachate collection and pretreatment system. Leachate is collected from the two Areas (each of which has its own lift station) and is conveyed to a 30,000-gallon underground storage tank. From there the leachate is piped to the pretreatment facility (for pH adjustment only) and final lift station before discharge to the sanitary sewer leading to the Stratford Water Pollution Control Facility. The ash leachate collection and pretreatment system began operation in August 1994 when the Southeast Lined Ash Area went into operation. Discharge fees are paid to Stratford Water Pollution Control Facility based on the quantity and quality of the discharge.

A truck wheel-wash facility was constructed at the site at the same time as the Southeast Lined Ash Area, but it had low water pressure that resulted in ineffective washing. In June 1996, improvements were made in the system that made it more effective. Operation of the wheel-wash facility was ended in February 1998 when deliveries of ash residue to the site were stopped. Wastewater from wheel-wash area had been treated in the ash leachate pretreatment system.

3.4.5 Site Security/Facilities/Utilities

Costs will continue to be incurred to maintain the fence and gates around the site, the office building (near the Transfer Station), the scale house, the leachate pretreatment facility, the gas extraction and collection system and associated utility services. Most of the current cost of the leachate and gas systems is for electricity.

3.4.6 Remediation

The groundwater flow and, therefore, the leachate plume from the unlined MSW/Ash Area, are generally considered to be in a southeasterly direction towards the Housatonic River and Lagoon. They also flow somewhat toward the Far Mill River, however, groundwater preferentially flows towards the east-northeast (i.e., away from the Far Mill River) in the southeastern portion of the landfill, due in part to a tidal wetland at least 300 feet wide between the toe of the slope and the Far Mill River. Neither the Southeast nor the Northeast Lined Ash Areas have had any leachate migration beyond their liners and neither is expected to have any in the future.

CRRA purchased the adjacent northerly property (the 200-foot wide "Crump" parcel) in February 1996. The purchase was in part to obtain the groundwater rights of the parcel. A plume investigation at the north end of the landfill had indicated that there was contamination in the bedrock on the adjacent parcel. The contamination was in one location near a dip in the bedrock at the north central part of the landfill. This contamination was attributed to leachate from the MSW/Ash Area or to off-site sources from the north or northwest. The investigation concluded that even under a worst-case scenario, a failure of the Northeast Lined Ash Area's liner(s) would not impact groundwater beyond the landfill's original northern boundary.

The "Crump" parcel has now been leased for use as a golf driving range and miniature golf course and batting cages. CRRA retains the groundwater rights to that parcel. CRRA has also obtained the groundwater rights to the parcel north of the "Crump" parcel, which has been developed for an indoor ice rink.

On February 19, 1998, CTDEP issued Consent Order SW-400. The Order requires CRRA to investigate and characterize the leachate plume emanating from the MSW/Ash Area and, ultimately, to acquire ownership or control of its zone of influence if it is not already in CRRA's possession. In June 1998, CRRA submitted a "scope of investigation" for the project. Because of delays in CTDEP's review of the "scope of investigation," work did not commence until Summer 2001. The report summarizing the zone of influence investigation was submitted to CTDEP in March 2003.

The zone of influence study concluded that the plume has traveled southerly and then easterly to the Housatonic River Lagoon, and not westerly, across route 110. Due to tidal influences and other subsurface hydrogeologic factors, the Far Mill River is not a receptor of the groundwater discharging from the Shelton Landfill. In addition, the plume's groundwater zone of influence does not extend beyond the northern property boundaries and the plume is not degrading surface water quality below the standards established by CTDEP for that class of water body. Therefore, no long-term costs for remediation work are included in the cost estimates at this time.

3.4.7 CTDEP Fees

The following are the permits for the Shelton Landfill and the annual fees associated with them:

Permit Type	Permit Number	Amount
Sitewide		
Stormwater	GSI000512	\$0
MSW/Ash Area		
Solid Waste	126-1VA	\$0
Groundwater Discharge	LF0000023	\$13,350
Northeast and Southeast Lined Ash Areas		
Solid Waste	1260227	\$0
Groundwater Discharge	LF0000052	\$13,350
Sanitary Sewer Discharge	SP0001459	\$4,088

3.5 Capacity Analysis

The Shelton Landfill stopped receiving waste in February 1998 and was certified by CTDEP as closed in April 2001.

The capacity of the various areas of the Landfill is as follows:

Area	Capacity (cubic yards)
MSW/Ash	5,105,000
Southeast Lined Ash	280,000
Northeast Lined Ash	161,700

The Shelton Landfill is closed and no longer has any capacity available.

3.6 Estimated Total Current Costs And Summary Of Recognized Charges

Prior to the Annual Evaluation for FY 2001, the costs for the three areas at the Shelton Landfill were considered separately. However, beginning with FY 2001, the costs and estimates for the Southeast and Northeast Lined Ash Areas have been combined since the 30-year post-closure monitoring period for both began on the same date.

3.6.1 MSW/Ash Area

As of June 30, 2007, the ETCC for the MSW/Ash Area is \$13,064,122, which is \$753,824 less than the ETCC at June 30, 2006. There are two reasons for the decrease in the ETCC.

- (a) For the June 30, 2006 Evaluation, CRRA had added to the ETCC the cost of carrying pollution liability insurance for the MSW/Ash Area. Subsequent to the June 30, 2006 Evaluation, CRRA determined that, while it will reserve funds for continuing to carry pollution liability insurance, the cost for such insurance should not be included in the GASB 18 ETCC since there is no permit, regulatory or statutory requirement that such insurance be carried. Removing the cost of insurance resulted in a decrease in the ETCC of \$1,248,000.
- (b) The decrease for the removal of pollution liability insurance from the ETCC was partially offset by CRRA's decision to add as a GASB 18 expense the cost of providing administration support (professional and field services staff support) for the maintenance and monitoring of the Landfill. This cost added \$598,000 (\$29,900 per year) to the ETCC for the landfill unit. Conversely, since the estimated costs for Engineering formerly included CRRA staff time that is now included in the Administration item, the cost of Engineering was decreased by \$190,000.

The cost of closure of the MSW/Ash Area was \$1,349,575. No additional closure costs are anticipated to be incurred.

The amount expended thus far in maintenance and monitoring is \$5,581,048, including \$287,826 in FY 2007. The major expenses in FY 2007 were the following:

- (a) Gas system maintenance (\$168,838);
- (b) Environmental monitoring (\$55,202); and,
- (c) Land surface care (\$22,993).

The amount estimated to complete the 30 years of maintenance and monitoring is \$6,323,500, which includes an estimate of \$342,250 for FY 2008. The major expenses anticipated in FY 2008 are the following:

- (a) Gas system maintenance (\$165,700);
- (b) Land Surface Care (\$49,250); and,
- (c) Environmental Monitoring (\$47,700).

3.6.2 Northeast and Southeast Lined Ash Areas

As of June 30, 2007, the ETCC for the Northeast and Southeast Lined Ash Areas is \$10,634,092, which is \$1,486,853 less than at June 30, 2006. The two primary reasons for this decrease are the same as the reasons for the decrease in the ETCC for the MSW/Ash Area.

- (a) CRRA's determination that the cost of continuing to carry pollution liability insurance should not be included in the ETCC lead to a reduction in the ETCC of \$1,641,000.
- (b) The decrease for the elimination of the cost of pollution liability insurance from the ETCC was partially offset by CRRA's decision to add as a GASB 18 expense the cost of providing administration support (professional and field services staff support) for the maintenance and monitoring of the Landfill. This cost added \$936,100 (\$40,700 per year) to the ETCC for the landfill unit. Conversely, since the estimated costs for the Leachate Management System and Engineering formerly included considerable CRRA staff time that is now included in the Administration item, the cost of the Leachate Management System was decreased by \$735,600 and Engineering by \$190,000.

While it had been estimated that \$530,000 would be expended for the Future Use Plan in FY 2007, there were no actual expenditures during the year. CRRA now projects that funds will not be expended on the Future Use Plan until FY 2010 and the entire \$530,000 has been added to the estimate of expenditures for FY 2010.

The cost of closure of the Northeast and Southeast Lined Ash Areas was \$3,187,067. No additional closure costs are anticipated to be incurred.

The amount expended thus far in maintenance and monitoring is \$1,975,925, including \$122,497 in FY 2007. The major expenses in FY 2007 were the following:

- (a) Environmental monitoring (\$55,202);
- (b) Land surface care (\$21,307); and,
- (c) Permit fees (\$17,438).

The amount estimated to complete the 30 years of maintenance and monitoring is \$5,471,100, which includes an estimate of \$198,550 for FY 2008. The major expenses anticipated in FY 2008 are the following:

- (a) Land surface care (\$49,250);
- (b) Environmental monitoring (\$47,700); and
- (c) Administration (\$40,700).

3.7 Financial Assurance

A 1990 CTDEP construction permit¹¹ requires CRRA to maintain closure and post-closure financial assurance in accordance with the law. A 1992 CTDEP construction permit¹² outlines specific financial assurance requirements for closure and post-closure maintenance and monitoring and references the regulations¹³ allowing the use of various test mechanisms to demonstrate that the financial assurance requirements have been met.

In November 1998, CTDEP amended the construction permit¹⁴ for the Shelton Landfill and authorized CRRA to use the "local government financial test" for the landfill. The mechanism can be used as financial assurance for five years of post-closure costs with closure costs to be reflected in the annual operating budget one year prior to the start of closure activities (see Attachment 1 to this document). No closure costs are expected after FY 2001 for any part of Shelton Landfill.

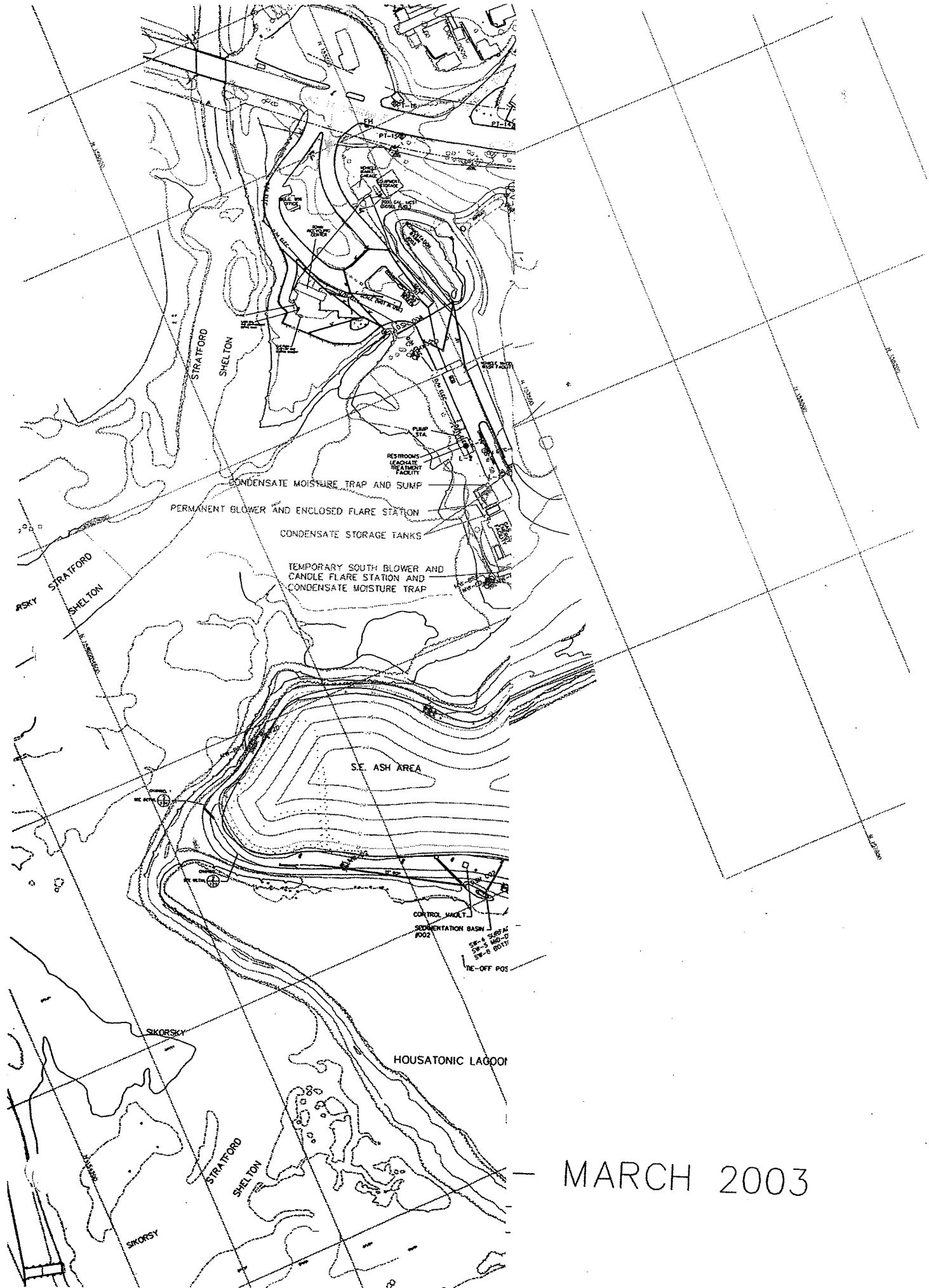
CRRA previously held a \$104,000 Letter of Credit for the MSW/Ash Area. With the use of the "Local Government Financial Test" financial assurance mechanism, it was determined that the Letter of Credit is no longer necessary and it was not renewed. CTDEP provided written confirmation of the Credit Trust Termination Agreement in February 2001.

¹¹ "Permit to Construct" for a vertical expansion to the Shelton MSW/Ash Landfill for ash residue disposal (No. 126-1VA), dated June 11, 1990, Section 14.

¹² "Permit to Construct" for the horizontal expansion for the Southeast and Northeast Lined Ash areas (No. 1260181); dated August 5, 1992, Section 15.

¹³ RCSA 22a-209-4(i).

¹⁴ Amendment of "Permit to Construct" No. 1260181, November 18, 1998.



MARCH 2003

Shelton Landfill - MSW/Ash Area
Estimated Total Current Cost

Monitoring Year	Fiscal Year	Closure Costs		Maintenance and Monitoring Costs		Adjusted Total Current Cost Actual (yrs 34-21) Estimate (yrs 20-1)
		Estimate	Actual	Estimate	Actual	
34 *	1994	\$1,048,250	\$461,449	\$0	\$0	\$461,449
33	1995	1,605,650	492,128	136,500	172,158	664,286
32	1996	1,737,450	23,726	148,000	139,049	162,775
31	1997	1,717,450	263,535	191,625	207,106	470,641
30 **	1998	476,600	89,210	194,600	141,866	231,076
29	1999	0	19,527	243,500	138,367	157,894
28	2000	0	0	1,259,900	1,070,290	1,070,290
27	2001	0	0	1,117,500	1,065,255	1,065,255
26	2002	0	0	1,274,400	1,166,887	1,166,887
25	2003	0	0	263,700	410,555	410,555
24	2004	0	0	283,700	260,083	260,083
23	2005	0	0	331,910	293,893	293,893
22	2006	0	0	304,960	227,714	227,714
21	2007	0	0	325,650	287,826	287,826
20	2008	0		342,250		342,250
19	2009	0		404,450		404,450
18	2010	0		384,050		384,050
17	2011	0		321,850		321,850
16	2012	0		321,950		321,950
15	2013	0		318,450		318,450
14	2014	0		328,450		328,450
13	2015	0		315,950		315,950
12	2016	0		323,450		323,450
11	2017	0		278,650		278,650
10	2018	0		278,650		278,650
9	2019	0		288,650		288,650
8	2020	0		276,150		276,150
7	2021	0		276,150		276,150
6	2022	0		276,150		276,150
5	2023	0		276,150		276,150
4	2024	0		286,150		286,150
3	2025	0		276,150		276,150
2	2026	0		283,650		283,650
1	2027	0		276,150		276,150
TOTALS		Yrs. 20-1	Yrs. 34-21	Yrs. 20-1	Yrs. 34-21	Yrs. 34-1
		\$0	\$1,349,575	\$6,133,500	\$5,581,048	\$13,064,122
		\$1,349,575		\$11,714,548		

Notes:

* Stopped receiving waste: August 1994

** CTDEP certified closure: October 1997

Shelton Landfill - MSW/Ash Area
Estimated Total Current Costs by Year

Estimate	Closure	Monitoring & Maintenance	ETCC
June 1994	973,750	1,673,000	2,646,750
June 1995	1,605,650	2,230,200	3,835,850
June 1996	1,737,450	2,590,000	4,327,450
June 1997	1,717,450	3,507,800	5,225,250
June 1998	1,330,048	3,534,679	4,864,727
June 1999	1,349,575	3,593,746	4,943,321
June 2000	1,349,575	8,638,836	9,988,411
June 2001	1,349,575	9,145,991	10,495,566
June 2002	1,349,575	10,350,365	11,699,940
June 2003	1,349,575	9,350,333	10,699,908
June 2004	1,349,575	9,935,395	11,284,970
June 2005	1,349,575	9,897,378	11,246,953
June 2006	1,349,575	12,468,372	13,817,947
June 2007	1,349,575	11,714,548	13,064,122

Shelton Landfill - MSW/Ash Area

Summary of Actual Closure Costs By Year

Item	Actual Costs						Summary of Actual Costs
	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	
1. Closure							
1.1 Engineering QA/QC	0	0	23,704	18,700	5,470	19,527	67,402
1.2 Site Work	461,449	455,201	0	223,026	83,739		1,223,415
1.3 Fencing	0	0	0	0	0		0
1.4 Gas Control Plan				2,800	0		2,800
Subtotal Closure	461,449	455,201	23,704	244,527	89,210	19,527	1,293,618
2. Monitoring Wells	0		22	0	0		22
3. Low Flow Sample Equipment	0	0	0	19,008	0		19,008
4. Habitat Characterization	0	36,927	0	0	0		36,927
Total	\$461,449	\$492,129	\$23,726	\$263,535	\$89,210	\$19,527	\$1,349,576

Shelton Landfill - MSW/Ash Area

**Actual Closure Costs By Quarter For Fiscal Year 2007
(June 1, 2006 - May 31, 2007)**

No closure costs were incurred for the Shelton Landfill - MSW/Ash Area in Fiscal Year 2007.

Shelton Landfill - MSW/Ash Area
Summary Of Actual Maintenance And Monitoring Costs By Year

Item	Actual Costs									
	Year 33 FY 1995	Year 32 FY 1996	Year 31 FY 1997	Year 30 FY 1998	Year 29 FY 1999	Year 28 FY 2000	Year 27 FY 2001	Year 26 FY 2002		
1. Inspections	460	0	0	0	0	0	0	0	0	0
2. Land Surface Care										
2.1 Mowing/Snow Removal/Etc.	1,556	3,463	0	700	1,775	95,562	2,633	69,809		
2.2 Stormwater Erosion Controls	110,871	41,636	45,870	25,504	45,984	69,006	0	0		
2.3 Vegetation and Soil Amendments	0	0	0	0	0	0	141,986	44,169		
Subtotal Land Surface Care	112,427	45,099	45,870	26,204	47,759	164,568	144,620	113,978		
3. Environmental Monitoring										
3.1 Groundwater/Stormwater	47,359	40,470	79,370	68,101	63,670	61,534	83,762	170,902		
3.2 Gas Port	0	0	0	0	0	0	0	0		
Subtotal Environmental Monitoring	47,359	40,470	79,370	68,101	63,670	61,534	83,762	170,902		
4. Leachate Management System	0	0	0	0	0	0	0	0		
5. Gas System Maintenance	4,802	52,280	67,902	21,927	18,567	804,825	23,489	827,181		
5.1 Close Flare and Misc.	0	0	0	0	0	0	0	0		
5.2 Gas Control Monitoring/Operations	0	1,200	0	0	1,266	0	22,000	0		
5.3 Temp. Candle to Permanent Flare	0	0	0	0	0	0	686,111	0		
5.4 Flare Permitting Process	0	0	0	0	0	0	48,819	0		
5.5 Natural Gas Supply/Flares	0	0	0	0	0	0	17,080	0		
Subtotal Gas System Maintenance	4,802	53,480	67,902	21,927	19,833	804,825	797,499	827,181		
6. Offices/Site Security	0	0	0	6,144	7,105	17,420	19,815	2,495		
7. Remediation	0	0	0	5,999	0	0	0	0		
8. Utilities	7,109	0	0	0	0	0	0	37,854		
9. Permit Fees	0	0	13,965	13,492	0	21,943	19,560	14,477		
10. Engineering	0	0	0	0	0	0	0	0		
11. Administration										
11.1 Professional Services	0	0	0	0	0	0	0	0		
11.2 Field Services	0	0	0	0	0	0	0	0		
Subtotal Administration	0	0	0	0	0	0	0	0		
Total	\$172,158	\$139,049	\$207,107	\$141,866	\$138,367	\$1,070,290	\$1,065,255	\$1,166,887		

Shelton Landfill - MSW/Ash Area
Summary Of Actual M&M Costs By Year (Continued)

Item	Year 25	Year 24	Year 23	Year 22	Year 21	Summary of Actual Costs to Date
	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	
1. Inspections	0	0	0	0	0	460
2. Land Surface Care						
2.1 Mowing/Snow Removal/Etc.	17,383	16,568	19,468	19,058	19,107	267,081
2.2 Stormwater Erosion Controls	0	0	800	0	0	339,672
2.3 Vegetation and Soil Amendments	43,335	16,335	0	0	3,887	249,712
Subtotal Land Surface Care	60,718	32,902	20,268	19,058	22,993	856,465
3. Environmental Monitoring						
3.1 Groundwater/Stormwater	125,533	44,508	57,533	50,288	55,202	948,232
3.2 Gas Port	0	2,642	0	0	0	2,642
Subtotal Environmental Monitoring	125,533	47,150	57,533	50,288	55,202	950,873
4. Leachate Management System	0	0	0	0	0	0
5. Gas System Maintenance	172,055	152,219	177,453	114,776	168,838	1,777,999
5.1 Close Flare and Misc.	0	0	0	0	0	828,313
5.2 Gas Control Monitoring/Operations	0	0	0	0	0	24,466
5.3 Temp. Candle to Permanent Flare	0	0	0	0	0	686,111
5.4 Flare Permitting Process	0	0	0	0	0	48,819
5.5 Natural Gas Supply/Flares	0	0	0	0	0	17,080
Subtotal Gas System Maintenance	172,055	152,219	177,453	114,776	168,838	3,382,788
6. Offices/Site Security	2,787	2,507	6,535	3,041	2,331	70,180
7. Remediation	5,880	0	0	0	0	11,879
8. Utilities	34,681	16,155	14,616	16,692	17,949	145,056
9. Permit Fees	8,900	9,150	13,350	13,350	13,350	141,536
10. Engineering	0	0	4,138	10,508	0	14,646
11. Administration						
11. Professional Services	0	0	0	0	0	0
11. Field Services	0	0	0	0	0	0
Subtotal Administration	0	0	0	0	0	0
Total	\$410,555	\$260,083	\$293,893	\$227,713	\$280,664	\$5,573,885

Shelton Landfill - MSW/Ash Area

Actual Maintenance And Monitoring Costs By Quarter For Fiscal Year 2007 (June 1, 2006 - May 31, 2007)

Item	Vendor	Account Number (34-###-701)	Basis of Cost	06/01/06 - 08/31/06	09/01/06 - 11/30/06	12/01/06 - 02/28/07	03/01/07 - 05/31/07	FY 2007 Total by Vendor	Estimated Costs for FY 2007
1. Site Inspections								0	1,000
Subtotal - Inspections				0	0	0	0	0	1,000
2. Land Surface Care									
2.1 Mowing/Snow Removal/Etc.	Major Motion	001 52415	Mowing (1/2 total)	5,592				5,592	25,000
	Niro Landscape	001 52415	Mowing (1/2 total)	1,575	9,850	1,455	635	13,515	
Subtotal Mowing/Snow Removal				7,167	9,850	1,455	635	19,107	25,000
2.2 Stormwater Erosion Controls									4,250
Subtotal Stormwater Erosion				0	0	0	0	0	4,250
2.3 Vegetation and Soil Amendments	Major Motion	001 52415	Brush Clearing (1/2 total)	2,200				2,200	20,000
	RL Rogers	001 52415	Repairs		1,687			1,687	
Subtotal Vegetation and Soil				2,200	1,687			3,887	20,000
Subtotal - Land Surface Care				9,367	11,537	1,455	635	22,993	49,250
3. Environmental Monitoring									
3.1 Groundwater/Stormwater	ERL	001 52901	1/2 total	3,354				3,354	47,700
	GZA Geoenvironmental	001 52901	1/2 total	6,101	8,619	14,990	22,138	51,848	
Subtotal Groundwater/Storm				9,455	8,619	14,990	22,138	55,202	47,700
3.2 Gas Port									0
Subtotal Gas Port				0	0	0	0	0	0
Subtotal - Environmental Monitoring				9,455	8,619	14,990	22,138	55,202	47,700
4. Leachate Management System									0
Subtotal - Leachate Management				0	0	0	0	0	0

Shelton Landfill - MSW/Ash Area

Actual Maintenance And Monitoring Costs By Quarter For Fiscal Year 2007 (June 1, 2006 - May 31, 2007)

Item	Vendor	Account Number (34-###-701)	Basis of Cost	06/01/06 - 08/31/06	09/01/06 - 11/30/06	12/01/06 - 02/28/07	03/01/07 - 05/31/07	FY 2007 Total by Vendor	Estimated Costs for FY 2007
5. Gas System Maintenance	Cisco, LLC	001 52858	Gas System Improvements			5,480		5,480	169,500
	Cisco, LLC	001 56605	Gas System Improvements			33,430		33,430	
	It's On Electrical	001 52407	Repairs			400		400	
	Neponset Controls	001 52407	Infrared	420				420	
	Northeast Generator	001 52407					420	420	
	Peerless Insurance	001 52701	Damage Payment				(1,312)	(1,312)	
	SCS Field Services	001 52701	Operation & Maintenance	23,194	24,224	57,759	23,195	128,372	
	TRC Environmental	001 52858	Operation & Maintenance		704	925		1,629	
Subtotal - Gas System Maintenance			23,614	24,928	97,994	22,302	168,838	169,500	
6. Office/Security System	AT&T	001 52104	Telephone (1/2 total)	426	430		426	1,712	1,250
	Grainger	001 52407	Materials	157		12	29	197	
	Orange Fence	001 52415	Fence Repairs (1/2 total)	3,335				3,335	
	Peerless Insurance	001 52415	Damage Payment (1/2 total)				(3,735)	(3,735)	
	Sontrol	001 52404	Security (1/2 total)	191	251	191	191	822	
	Subtotal - Office/Security System			4,108	680	632	(3,089)	2,331	1,250
7. Remediation								0	
Subtotal - Remediation			0	0	0	0	0	0	
8. Utilities	Aquarion Water Co.	001 53309	Water (1/2 total)	221	194	208	68	691	30,000
	United Illuminating	001 53304	Electricity (4/5 total)	2,899	3,335	5,772	5,253	17,259	
	Subtotal - Utilities			3,120	3,529	5,979	5,321	17,949	30,000
9. Permit Fees	CTDEP	001 52502	Annual Permit Fees	13,350				13,350	13,450
	Subtotal - Permit Fees			13,350	0	0	0	13,350	13,450
10. Engineering	Fuss & O'Neill	001 52858	Review Quarterly Report			342		342	10,000
	HRP Associates	001 52858	Risk Assessment (1/2 total)	2,901		1,709		4,610	
	SCS Engineers	001 52858	Technical Support	1,294	772		145	2,210	
	Subtotal - Engineering			4,194	772	2,051	145	7,162	10,000

Shelton Landfill - MSW/Ash Area

Actual Maintenance And Monitoring Costs By Quarter For Fiscal Year 2007 (June 1, 2006 - May 31, 2007)

Item	Vendor	Account Number (34-###-701)	Basis of Cost	06/01/06 - 08/31/06	09/01/06 - 11/30/06	12/01/06 - 02/28/07	03/01/07 - 05/31/07	FY 2007 Total by Vendor	Estimated Costs for FY 2007
11. Insurance								0	3,500
Subtotal - Insurance				0	0	0	0	0	3,500
Total Cost Of Maintenance & Monitoring (Incremental)				\$67,208	\$50,065	\$123,101	\$47,452	\$287,826	\$325,650
Total Cost of Maintenance & Monitoring (Cumulative)				\$67,208	\$117,273	\$240,374	\$287,826		

Shelton Landfill - MSW/Ash Area

Estimated Closure Costs Remaining at June 30, 2007

No closure costs are anticipated to remain for the MSW/Ash Area of the Shelton Landfill.

Shelton Landfill - MSW/Ash Area
Estimated Post-Closure Maintenance and Monitoring Costs Remaining at June 30, 2007

Item	Year	20	19	18	17	16	15	14	13	12	11	10	9
	FY	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1. Site Inspections (1)		0	0	0	0	0	0	0	0	0	0	0	0
2. Land Surface Care													
2.1 Mowing/Snow Removal/Sweeping (2)		25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
2.2 Stormwater Erosion Controls (3)		4,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	9,750	2,250	2,250	2,250
2.3 Vegetation & Soil Amendments (4)		20,000	20,000	10,000	10,000	10,000	10,000	10,000	7,500	7,500	7,500	7,500	7,500
Subtotal Land Surface Care		49,250	47,250	37,250	37,250	37,250	37,250	37,250	34,750	42,250	34,750	34,750	34,750
3. Environmental Monitoring													
3.1 Groundwater/Stormwater (5)		47,700	47,700	47,700	47,700	47,700	47,700	47,700	47,700	47,700	23,850	23,850	23,850
3.2 Ecological Risk Assessment (5)		0	62,500	62,500	0	0	0	0	0	0	0	0	0
Subtotal Environmental Monitoring		47,700	110,200	110,200	47,700	47,700	47,700	47,700	47,700	47,700	23,850	23,850	23,850
4. Leachate Management System		0	0	0	0	0	0	0	0	0	0	0	0
5. Gas System Maintenance (6)		165,700	167,400	157,000	159,800	159,900	157,400	167,400	157,400	157,400	157,400	157,400	167,400
6. Office/Security System (7)		1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250
7. Remediation		0	0	0	0	0	0	0	0	0	0	0	0
8. Utilities (8)		30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
9. Permit Fees (9)		13,450	13,450	13,450	13,450	13,450	13,450	13,450	13,450	13,450	0	0	0
10. Engineering (10)		5,000	5,000	5,000	2,500	2,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
11. Administration													
11.1 Professional Services		27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500
11.2 Field Services		2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Subtotal Administration		29,900	29,900	29,900	29,900	29,900	29,900	29,900	29,900	29,900	29,900	29,900	29,900
Cost of Maintenance & Monitoring		342,250	404,450	384,050	321,850	321,950	318,450	328,450	315,950	323,450	278,650	278,650	288,650

Notes:

- (1) Included in 11.1, "Administration-Professional Services."
- (2) Mowing & Snow Plowing portion of Account 52415 (Grounds Maintenance; 0.5)
- (3) Drainage Maintenance and Sediment Pond Dredging portions of Account 52645 (Landfill Closure/Postclosure; 0.5)
- (4) Seep Repair portion of Account 52645 (Landfill Closure/Postclosure; 0.5)
- (5) Ground, Surface, Storm portion of Account 52901 (Environmental Testing; 0.5)
- (6) Account 52407 (Project Equipment Maintenance; 0.5), Gas System O&M and Gas
- (7) Account 52404 (Building Operations; 0.5)
- (8) Account 52104 (Telephone & Pagers; 0.5), Account 53304 (Electricity; 0.8) and Account 53309 (Other Utilities; 0.5)
- (9) Portion of Account 52502 (Fees/Licenses/Permits), but excluding Hazardous Waste Permits
- (10) Account 52858 (Engineering; 0.5)

Shelton Landfill - MSW/Ash Area
Estimated Post-Closure Maintenance and Monitoring Costs Remaining at June 30, 2007 (Continued)

Item	Year	8	7	6	5	4	3	2	1	Total
	FY	2020	2021	2022	2023	2024	2025	2026	2027	
1. Site Inspections (1)		0	0	0	0	0	0	0	0	0
2. Land Surface Care										
2.1 Mowing/Snow Removal/Sweeping (2)		25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	500,000
2.2 Stormwater Erosion Controls (3)		2,250	2,250	2,250	2,250	2,250	2,250	9,750	2,250	62,000
2.3 Vegetation & Soil Amendments (4)		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	167,500
Subtotal Land Surface Care		32,250	32,250	32,250	32,250	32,250	32,250	39,750	32,250	729,500
3. Environmental Monitoring										
3.1 Groundwater/Stormwater (5)		23,850	23,850	23,850	23,850	23,850	23,850	23,850	23,850	691,650
3.2 Ecological Risk Assessment (5)		0	0	0	0	0	0	0	0	125,000
Subtotal Environmental Monitoring		23,850	23,850	23,850	23,850	23,850	23,850	23,850	23,850	816,650
4. Leachate Management System		0	0	0	0	0	0	0	0	0
5. Gas System Maintenance (6)		157,400	157,400	157,400	157,400	167,400	157,400	157,400	157,400	3,200,800
6. Office/Security System (7)		1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	25,000
7. Remediation		0	0	0	0	0	0	0	0	0
8. Utilities (8)		30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	600,000
9. Permit Fees (9)		0	0	0	0	0	0	0	0	121,050
10. Engineering (10)		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	42,500
11. Administration										
11.1 Professional Services		27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	550,000
11.2 Field Services		2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	48,000
Subtotal Administration		29,900	29,900	29,900	29,900	29,900	29,900	29,900	29,900	598,000
Cost of Maintenance & Monitoring		276,150	276,150	276,150	276,150	286,150	276,150	283,650	276,150	6,133,500

Notes:

- (1) Included in 11.1, "Administration-Professional Services."
- (2) Mowing & Snow Plowing portion of Account 52415 (Grounds Maintenance; 0.5)
- (3) Drainage Maintenance and Sediment Pond Dredging portions of Account 52645 (Landfill Closure/Postclosure; 0.5)
- (4) Seep Repair portion of Account 52645 (Landfill Closure/Postclosure; 0.5)
- (5) Ground, Surface, Storm portion of Account 52901 (Environmental Testing; 0.5)
- (6) Account 52407 (Project Equipment Maintenance; 0.5), Gas System O&M and Gas
- (7) Account 52404 (Building Operations; 0.5)
- (8) Account 52104 (Telephone & Pagers; 0.5), Account 53304 (Electricity; 0.8) and Account 53309 (Other Utilities; 0.5)
- (9) Portion of Account 52502 (Fees/Licenses/Permits), but excluding Hazardous Waste Permits
- (10) Account 52858 (Engineering; 0.5)

Shelton Landfill - NE And SE Lined Ash Areas

Estimated Total Current Cost

Monitoring Year	Fiscal Year	Closure Costs		Maintenance and Monitoring Costs		Adjusted Total Current Cost Actual (yrs 34-24) Estimate (yrs 23-1)
		Estimate	Actual	Estimate	Actual	
34	1997	\$1,759,800	\$98,208	\$100,600	\$111,949	\$210,157
33 *	1998	2,975,000	61,525	251,200	188,751	250,276
32	1999	2,809,000	1,008,127	251,000	188,246	1,196,373
31	2000	1,770,000	1,802,225	231,000	193,336	1,995,561
30 **	2001	250,000	216,982	215,000	268,634	485,616
29	2002	0	0	752,400	338,815	338,815
28	2003	0	0	713,900	228,316	228,316
27	2004	0	0	662,900	106,513	106,513
26	2005	0	0	738,090	116,674	116,674
25	2006	0	0	726,140	112,194	112,194
24	2007	0	0	732,250	122,497	122,497
23	2008	0	0	198,550		198,550
22	2009	0	0	258,050		258,050
21	2010	0	0	765,550		765,550
20	2011	0	0	220,550		220,550
19	2012	0	0	218,050		218,050
18	2013	0	0	214,550		214,550
17	2014	0	0	224,550		224,550
16	2015	0	0	212,050		212,050
15	2016	0	0	219,550		219,550
14	2017	0	0	188,250		188,250
13	2018	0	0	188,250		188,250
12	2019	0	0	198,250		198,250
11	2020	0	0	185,750		185,750
10	2021	0	0	185,750		185,750
9	2022	0	0	185,750		185,750
8	2023	0	0	185,750		185,750
7	2024	0	0	195,750		195,750
6	2025	0	0	185,750		185,750
5	2026	0	0	193,250		193,250
4	2027	0	0	185,750		185,750
3	2028	0	0	203,800		203,800
2	2029	0	0	203,800		203,800
1	2030	0	0	203,800		203,800
TOTALS		Yrs. 23-1	Yrs. 34-24	Yrs. 23-1	Yrs. 34-24	Yrs. 34-1
		\$0	\$3,187,067	\$5,221,100	\$1,975,925	\$10,384,092
		\$3,187,067		\$7,197,025		

Notes:

* Stopped receiving waste: NE - February 1998; SE Area - June 1996

** CTDEP certified closure: NE - April 2001; SE - April 2001

Shelton Landfill - NE And SE Lined Ash Areas

Estimated Total Current Costs by Year

Estimate	Closure	Monitoring & Maintenance	ETCC
June 1994	657,500	1,434,500	2,092,000
June 1995	682,500	1,398,500	2,081,000
June 1996 ¹	2,741,650	3,294,300	6,035,950
June 1997	2,975,000	4,463,200	7,438,200
June 1998	2,968,734	4,759,700	7,728,434
June 1999	2,937,861	6,695,746	9,633,607
June 2000	3,980,297	6,885,120	10,865,417
June 2001	3,187,067	6,555,516	9,742,583
June 2002	3,187,067	6,566,846	9,753,913
June 2003	3,187,067	6,936,347	10,123,414
June 2004	3,187,067	7,448,480	10,635,547
June 2005	3,187,067	7,307,064	10,494,131
June 2006	3,187,067	8,933,878	12,120,945
June 2007	3,187,067	7,197,025	10,384,092

Shelton Landfill - NE and SE Lined Ash Areas

Summary of Actual Closure Costs By Year

Item	Actual Costs					Summary of Actual Costs
	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	
1. Closure						
1.1 Engineering QA/QC (1)		9,643	8,059	254,825	25,726	298,253
1.2 Site Work						
1.2.1 Final Cover	43,500		1,000,068	1,438,933	191,256	2,673,757
1.2.2 Road/Swale				108,468		108,468
1.2.3 Interim Cover	35,700	51,882				87,582
Subtotal Site Work	79,200	51,882	1,000,068	1,547,400	191,256	2,869,806
1.3 Fencing						0
1.4 Gas Control Plan						0
Subtotal Closure	79,200	61,525	1,008,127	1,802,225	216,982	3,168,060
2. Monitoring Wells						0
3. Low Flow Sample Equipment	19,008					19,008
Total	\$98,208	\$61,525	\$1,008,127	\$1,802,225	\$216,982	\$3,187,068

Notes:

(1)

GeoCon's potential claims settled with a \$200,000 reversal during FY 2001.

Shelton Landfill - NE and SE Lined Ash Areas

**Actual Closure Costs By Quarter For Fiscal Year 2007
(June 1, 2006 - May 31, 2007)**

***No closure costs were incurred for the Shelton Landfill - NE and SE Lined Ash Areas in
Fiscal Year 2007.***

Shelton Landfill - NE and SE Lined Ash Areas
Summary Of Actual Maintenance And Monitoring Costs By Year

Item	Actual Costs									
	Year 34 FY 1997	Year 33 FY 1998	Year 32 FY 1999	Year 31 FY 2000	Year 30 FY 2001	Year 29 FY 2002	Year 28 FY 2003			
1. Inspections	0	0	0	0	0	0	0			
2. Land Surface Care										
2.1 Mowing/Snow Plowing/Etc.	0	0	0	0	0	69,809	17,383			
2.2 Stormwater and Erosion	0	1,400	750	0	27,167	0	0			
2.3 Vegetation and Soil Amendments		4,194	0	2,800	15,454	3,495	30,182			
Subtotal Land Surface Care	0	5,594	750	2,800	42,621	73,304	47,565			
3. Environmental Monitoring										
3.1 Groundwater/Stormwater	79,370	101,746	127,339	123,068	143,071	183,252	125,684			
3.2 Gas Port	0	0	0	0	0	0	0			
Subtotal Environmental Monitoring	79,370	101,746	127,339	123,068	143,071	183,252	125,684			
4. Leachate Management System	16,550	56,571	45,247	22,192	27,458	45,836	24,811			
5. Gas System Maintenance	0	0	0	0	0	0	0			
6. Office/Site Security	0	5,670	14,210	36,026	44,177	2,495	2,787			
7. Remediation	0	0	0	0	0	0	5,880			
8. Utilities (1)	11,049	8,737	0	0	0	12,950	9,964			
9. Permit Fees	4,980	10,433	700	9,250	11,306	9,250	11,625			
10. Future Use Plan - Passive Recreation	0	0	0	0	0	11,729	0			
11. Engineering	0	0	0	0	0	0	0			
12. Administration										
12.1 Professional Services	0	0	0	0	0	0	0			
12.2 Field Services	0	0	0	0	0	0	0			
Subtotal Administration	0	0	0	0	0	0	0			
Total	\$111,949	\$188,751	\$188,247	\$193,336	\$268,634	\$338,815	\$228,316			

Notes:

(1) To operate gas flare and leachate systems.

Shelton Landfill - NE and SE Lined Ash Areas
Summary Of Actual Maintenance & Monitoring Costs By Year (Cont.)

Item	Actual Costs				Summary of Actual Costs to Date
	Year 27 FY 2004	Year 26 FY 2005	Year 25 FY 2006	Year 24 FY 2007	
1. Inspections	0	0	0	0	0
2. Land Surface Care					
2.1 Mowing/Snow Plowing/Etc.	16,568	19,468	19,058	19,107	161,392
2.2 Stormwater and Erosion	0	800	3,388	0	33,504
2.3 Vegetation and Soil Amendments	14,500	0	0	2,200	72,825
Subtotal Land Surface Care	31,067	20,268	22,446	21,307	267,721
3. Environmental Monitoring					
3.1 Groundwater/Stormwater	44,556	57,533	50,288	55,202	1,091,109
3.2 Gas Port	0	0	0	0	0
Subtotal Environmental Monitoring	44,556	57,533	50,288	55,202	1,091,109
4. Leachate Management System	11,097	3,790	10,418	15,190	279,161
5. Gas System Maintenance	0	0	0	0	0
6. Office/Site Security	2,507	6,535	3,041	2,331	119,780
7. Remediation	0	0	0	0	5,880
8. Utilities (1)	5,411	4,396	7,263	5,428	65,198
9. Permit Fees	11,875	17,438	17,438	17,438	121,732
10. Future Use Plan - Passive Recreation	0	1,279	0	0	13,008
11. Engineering	0	5,436	1,300	5,602	12,338
12. Administration					
12.1 Professional Services	0	0	0	0	0
12.2 Field Services	0	0	0	0	0
Subtotal Administration	0	0	0	0	0
Total	\$106,513	\$116,674	\$112,194	\$122,497	\$1,975,926

Shelton Landfill - NE and SE Lined Ash Areas
Actual Maintenance And Monitoring Costs By Quarter For Fiscal Year 2007 (June 1, 2006 - May 31, 2007)

Item	Vendor	Account Number (34-###-701)	Basis of Cost	06/01/06 - 08/31/06	09/01/06 - 11/30/06	12/01/06 - 02/28/07	03/01/07 - 05/31/07	FY 2007 Total by Vendor	Estimated Costs for FY 2007
1. Site Inspections								0	1,000
Subtotal - Inspections				0	0	0	0	0	1,000
2. Land Surface Care									
2.1 Mowing/Snow Removal/Etc.	Major Motion	001 52415	Mowing (1/2 total)	5,592				5,592	25,000
	Nirol Landscape	001 52415	Mowing (1/2 total)	1,575	9,850	1,455	635	13,515	
Subtotal Mowing/Snow Removal				7,167	9,850	1,455	635	19,107	25,000
2.2 Stormwater Erosion Controls	Park Trucking	001-52415	Repairs					0	4,250
Subtotal Stormwater Erosion				0	0	0	0	0	4,250
2.3 Vegetation and Soil Amendments	Major Motion	001 52415	Brush Clearing (1/2 total)	2,200				2,200	20,000
Subtotal Vegetation and Soil				2,200	0	0	0	2,200	20,000
Subtotal - Land Surface Care				9,367	9,850	1,455	635	21,307	49,250
3. Environmental Monitoring									
3.1 Groundwater/Stormwater	ERL	001 52901	1/2 total	3,354				3,354	47,700
	GZA Geoenvironmental	001 52901	1/2 total	6,101	8,619	14,990	22,138	51,848	
Subtotal Groundwater/Storm				9,455	8,619	14,990	22,138	55,202	47,700
3.2 Gas Port								0	0
Subtotal Groundwater/Storm				0	0	0	0	0	0
Subtotal - Environmental Monitoring				9,455	8,619	14,990	22,138	55,202	47,700
4. Leachate Management System									
	Astro Chemicals	001 52407	Chemicals		322			322	59,400
	Badger Meters	152407	Meters for pumps			819		819	
	F.W. Webb	001 52407	Submersible Pump		1,373			1,373	
	Grainger	001 52407	Equipment			54		54	
	Grainger	001 52709	Equipment		151			151	
	Knapp Engineering	001 52407	Repairs	4,485	1,815	1,431	1,935	9,666	
	Milford Electric	001 52407	Repair Line	1,827				1,827	
	Northeast Tank	001 52407	Catholic Testing		800			800	
	Oatley Plumbing	001 52709	Repairs		178			178	
Subtotal - Leachate Management				6,312	4,638	2,305	1,935	15,190	59,400

Shelton Landfill - NE and SE Lined Ash Areas
Actual Maintenance And Monitoring Costs By Quarter For Fiscal Year 2007 (June 1, 2006 - May 31, 2007)

Item	Vendor	Account Number (34-###-701)	Basis of Cost	06/01/06 - 08/31/06	09/01/06 - 11/30/06	12/01/06 - 02/28/07	03/01/07 - 05/31/07	FY 2007 Total by Vendor	Estimated Costs for FY 2007
5. Gas System Maintenance								0	0
Subtotal - Gas System Maintenance				0	0	0	0	0	0
6. Office/Security System									1,250
AT&T		001 52104	Telephone (1/2 total)	426	430	430	426	1,712	
Grainger		001 52407	Materials	157		12	29	197	
Orange Fence		001 52415	Fence Repairs (1/2 total)	3,335			(3,735)	3,335	
Peerless Insurance		001 52415	Damage Payment (1/2 total)					(3,735)	
Sonitrol		001 52404	Security (1/2 total)	191	251	191	191	822	
Subtotal - Office/Security System				4,108	680	632	(3,089)	2,331	1,250
7. Remediation									
Subtotal - Remediation								0	
8. Utilities									12,600
Aquarion Water Co.		001 53309	Water (1/2 total)	221	194	208	68	691	
Town of Stratford		001 53309	Sewer Use Fee	422				422	
United Illuminating		001 53304	Electricity (1/5 total)	725	834	1,443	1,313	4,315	
Subtotal - Utilities				1,368	1,028	1,650	1,381	5,428	12,600
9. Permit Fees									17,550
CTDEP		001 52502	Annual permit fees	17,438				17,438	
Subtotal - Permit Fees				17,438	0	0	0	17,438	17,550
10. Future Use Plan									530,000
Subtotal - Future Use Plan				0	0	0	0	0	530,000
11. Engineering									10,000
Fuss & O'Neill		001 52858	Review Quarterly Report			342		342	
HRP Associates		001 52858	Risk Assessment (1/2 total)	2,901		1,709		4,610	
Knapp Engineering		001 52858	Quarterly Inspection	650				650	
Subtotal - Engineering				3,551	0	2,051	0	5,602	10,000
12. Insurance									3,500
Subtotal - Insurance				0	0	0	0	0	3,500
Total Cost Of Maintenance & Monitoring (Incremental)				\$51,599	\$24,815	\$23,084	\$23,000	\$122,497	\$732,250
Total Cost of Maintenance & Monitoring (Cumulative)				\$51,599	\$76,414	\$99,498	\$122,497		

Shelton Landfill - NE and SE Lined Ash Areas

Estimated Closure Costs Remaining at June 30, 2007

No closure costs are anticipated to remain for the NE and SE Lined Ash Areas of the Shelton Landfill.

Shelton Landfill - NE and SE Lined Ash Areas
Estimated Post-Closure Maintenance and Monitoring Costs Remaining at June 30, 2007

Item	Year											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1. Site Inspections (1)	0	0	0	0	0	0	0	0	0	0	0	0
2. Land Surface Care												
2.1 Mowing/Snow Removal/Etc. (2)	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
2.2 Stormwater Erosion Controls (3)	4,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	9,750	2,250	2,250	2,250
2.3 Vegetation & Soil Amendments (4)	20,000	20,000	10,000	10,000	10,000	10,000	10,000	7,500	7,500	7,500	7,500	7,500
Subtotal Land Surface Care	49,250	47,250	37,250	37,250	37,250	37,250	37,250	34,750	42,250	34,750	34,750	34,750
3. Environmental Monitoring												
3.1 Groundwater/Stormwater (5)	47,700	47,700	47,700	47,700	47,700	47,700	47,700	47,700	47,700	23,850	23,850	23,850
3.2 Ecological Risk Assessment (5)	0	62,500	62,500	0	0	0	0	0	0	0	0	0
Subtotal Environmental Monitoring	47,700	110,200	110,200	47,700	47,700	47,700	47,700	47,700	47,700	23,850	23,850	23,850
4. Leachate Management System (6)	24,500	23,500	11,000	11,000	8,500	6,000	16,000	6,000	6,000	6,000	6,000	16,000
5. Gas System Maintenance	0	0	0	0	0	0	0	0	0	0	0	0
6. Office/Security System (7)	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250
7. Remediation												
8. Utilities (8)	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600
9. Permit Fees (9)	17,550	17,550	17,550	17,550	17,550	17,550	17,550	17,550	17,550	17,600	17,600	17,600
10. Future Use Plan - Passive Recreation (10)			530,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
11. Engineering (11)	5,000	5,000	5,000	2,500	2,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
12. Administration												
12.1 Professional Services	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500
12.2 Field Services (12)	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200
Subtotal Administration	40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700
Cost of Maintenance & Monitoring	198,550	258,050	765,550	220,550	218,050	214,550	224,550	212,050	219,550	188,250	188,250	198,250

Notes:

- (1) Included in 12.1, Administration - Professional Services
- (2) Mowing & Snow Plowing portion of Account 52415 (Grounds Maintenance; 0.5)
- (3) Drainage Maintenance & Sediment Pond Dredging portions of Account 52645 (LF Closure/Postclosure; 0.5)
- (4) Seep Repair portion of Account 52645 (Landfill Closure/Postclosure; 0.5)
- (5) Ground, Surface, Storm portion of Account 52901 (Environmental Testing; 0.5)
- (6) Account 52407 (Project Equipment Maintenance; 0.5) and Chart Paper and Leachate Tank Inspection portions of Account 52701 (Contract Operating Charges)
- (7) Account 52404 (Building Operations; 0.5)
- (8) Account 52104 (Telephone & Pagers; 0.5), Account 53304 (Electricity; 0.8) and Account 53309 (Other Utilities; 0.5)
- (9) Portion of Account 52502 (Fees/Licenses/Permits), but excluding Hazardous Waste Permits
- (10) Future Use Plan portion of Account 52415 (Grounds Maintenance)
- (11) Account 52858 (Engineering; 0.5)
- (12) Includes Leachate System O&M Costs

Shelton Landfill - NE and SE Lined Ash Areas
Estimated Post-Closure Maintenance and Monitoring Costs Remaining at June 30, 2007 (Continued)

Item	Year	11	10	9	8	7	6	5	4	3	2	1	Total
	FY	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
1. Site Inspections (1)		0	0	0	0	0	0	0	0	0	0	0	0
2. Land Surface Care													
2.1 Mowing/Snow Removal/Etc. (2)		25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	575,000
2.2 Stormwater Erosion Controls (3)		2,250	2,250	2,250	2,250	2,250	2,250	9,750	2,250	2,700	2,700	2,700	70,100
2.3 Vegetation & Soil Amendments (4)		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	0	0	0	167,500
Subtotal Land Surface Care		32,250	32,250	32,250	32,250	32,250	32,250	39,750	32,250	27,700	27,700	27,700	812,600
3. Environmental Monitoring													
3.1 Groundwater/Stormwater (5)		23,850	23,850	23,850	23,850	23,850	23,850	23,850	23,850	47,700	47,700	47,700	834,750
3.2 Ecological Risk Assessment (5)		0	0	0	0	0	0	0	0	0	0	0	125,000
Subtotal Environmental Monitoring		23,850	23,850	23,850	23,850	23,850	23,850	23,850	23,850	47,700	47,700	47,700	959,750
4. Leachate Management System (6)		6,000	6,000	6,000	6,000	16,000	6,000	6,000	6,000	6,000	6,000	6,000	216,500
5. Gas System Maintenance		0	0	0	0	0	0	0	0	0	0	0	0
6. Office/Security System (7)		1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	2,500	2,500	2,500	32,500
7. Remediation													0
8. Utilities (8)		12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	10,100	10,100	10,100	282,300
9. Permit Fees (9)		17,600	17,600	17,600	17,600	17,600	17,600	17,600	17,600	17,600	17,600	17,600	404,350
10. Future Use Plan - Passive Recreation (10)		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	1,530,000
11. Engineering (11)		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	47,000
12. Administration													
12.1 Professional Services		27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	632,500
12.2 Field Services (12)		13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	303,600
Subtotal Administration		40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700	40,700	936,100
Cost of Maintenance & Monitoring		185,750	185,750	185,750	185,750	195,750	185,750	193,250	185,750	203,800	203,800	203,800	5,221,100

Notes:

- (1) Included in 12.1, Administration - Professional Services
- (2) Mowing & Snow Plowing portion of Account 52415 (Grounds Maintenance; 0.5)
- (3) Drainage Maintenance & Sediment Pond Dredging portions of Account 52645 (LF Closure/Postclosure; 0.5)
- (4) Seep Repair portion of Account 52645 (Landfill Closure/Postclosure; 0.5)
- (5) Ground, Surface, Storm portion of Account 52901 (Environmental Testing; 0.5)
- (6) Account 52407 (Project Equipment Maintenance; 0.5) and Chart Paper and Leachate Tank Inspection portions of Account 52701 (Contract Operating Charges)
- (7) Account 52404 (Building Operations; 0.5)
- (8) Account 52104 (Telephone & Pagers; 0.5), Account 53304 (Electricity; 0.8) and Account 53309 (Other Utilities; 0.5)
- (9) Portion of Account 52502 (Fees/Licenses/Permits), but excluding Hazardous Waste Permits
- (10) Future Use Plan portion of Account 52415 (Grounds Maintenance)
- (11) Account 52858 (Engineering; 0.5)
- (12) Includes Leachate System O&M Costs